

ASEAN人造りプロジェクト

インドネシア共和国

インドネシア職業訓練指導員・小規模工業普及員養成センター

(小規模工業部門)(CEVEST-EST)

エバリュエーション調査団,

計画打合せ調査団(フォローアップ協力)報告書

昭和63年6月

国際協力事業団

鉦開技

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国際協力事業団

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序 文

インドネシア共和国における小規模工業の発展に寄与することを目的とする本プロジェクトは、昭和58年2月16日にR/Dが署名され、5年間の協力が開始された。

当事業団は昭和62年11月12日より11月18日まで本プロジェクトの協力実績を評価するとともに、「イ」側とプロジェクト結結に係る必要な協議を行うことを目的としてエバリュエーション調査団を派遣した。協議の結果、フォローアップ協力として協力期間を一年間延長することとなり、フォローアップ協力期間における実施計画を策定する為、昭和63年4月25日より5月1日まで、計画打合せ調査団を派遣した。

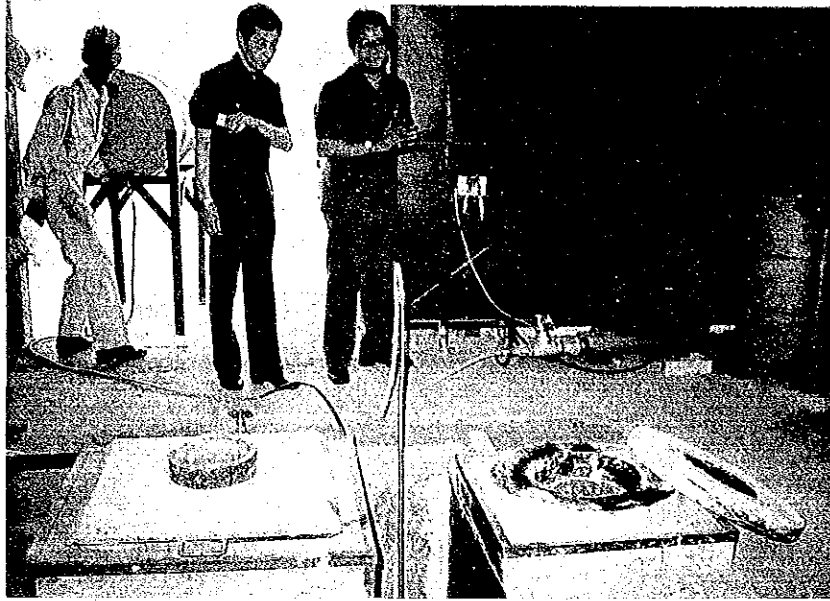
本報告書は、これら2つの調査団による調査結果を取りまとめたものである。

ここに、今般の調査に対して御協力を頂いた在インドネシア日本国大使館をはじめとする関係各位に対し、心より謝意を表するものである。

昭和63年6月

国際協力事業団

欽工業開発協力部長 角野祥三



技術研修 非鉄鑄造コースワークショップ



技術研修 非鉄鑄造コース開講式
(昭和62年11月16日)

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I エバリュエーション調査

1. エバリュエーション調査団の派遣

1-1 調査団派遣の経緯と目的

- (1) 昭和58年2月16日より、小規模工業普及員の養成、小規模工業に係る基礎的調査・研究並びに企業家等への指導・相談を主たる目的として協力を開始した本プロジェクトは、昭和63年2月15日には、5年間の協力期限が到来する。
- (2) 一方、昭和62年3月16日より3月24日まで派遣した巡回指導チーム(第2次)は、「イ」側との協議の結果61年8月派遣した第1次巡回指導チームが「イ」側と作成署名したミニッツに基づき、新たに非鉄鑄造及び鍛造分野の技術研修を各々、昭和62年11月、63年1月に各1回実施することで合意した。
- (3) 今般、エバリュエーションチームを派遣し、本件事業の当初目標の達成度を調査し、今後に残された課題を把握し、解決を図ると共に、上記技術研修の実施につき、「イ」側と協議を行うこととする。又、本件協力の延長問題に関し相手側と協議し、その結果協力継続が必要と判断された場合には、具体的な協力内容と方法について協議を行う。(尚、この場合エバリュエーションレポートに評価結果を取りまとめ、又必要に応じ協議結果内容をミニッツに集約する。)

1-2 調査団の構成

| | | |
|-----------------|--------|--------------------------------------|
| 団 長 | 総 括 | 隅 田 栄 亮 国際協力事業団鉦工業開発協力部調査役 |
| スペシャル アドバイザー | 技術研修計画 | 塚 本 壽 雄 通産省中小企業庁指導部取引流通課長 |
| 団 員 | 業務調整 | 石 川 武 国際協力事業団鉦工業開発協力部 鉦工業開発技術課 |

1-3 調査団の日程表

| | |
|--------------|-------------------------------------------|
| 62年11. 10(火) | 成田——ジャカルタ(GA873) |
| 11. 11(水) | JICA事務所表敬, 打合せ 専門家と打合せ(調査団対処方針について) |
| 11. 12(木) | 工業省DGS I(小規模工業総局)表敬 打合せ(レンコン金属局長以下14名) |

- ・プロジェクトの基本方向について
 - ・エバ・レポート及びM/Dの日本側提案の説明。
- 11. 13 (金) D G S I トリスラ総局長表敬。
打合せ(レンコン局長以下5名)
 - ・エバ・レポート及びM/Dについて、双方の意見交換を行う。
- 11. 14 (土) D G S I と打合せ
 - ・エバレポート, M/Dの最終案作成。
- 11. 15 (日) エバレポート, M/Dの署名交換。
- 11. 16 (月) 10:00 CEVEST-EST技術研修非鉄鑄造コース開講式出席
15:00 J I C A 事務所報告
- 11. 17 (火) 塚本課長 スカブミ地区クラスター調査
隅田団長, 石川団員専門家と打合せ
- 11. 18 (水) ジャカルタ—成田(CX710, 500)

1-4 主要面談者

| 氏 名 | 所 属 先 及 び 職 名 |
|-------------------------|-----------------------------------------------------------|
| (インドネシア側) | |
| 1. Mr. Trisura Suhardi | Director General for Small Industries |
| 2. Mr. Binaldjemur | Secretary of the Directorate General for Small Industries |
| 3. Mr. F. Lengkong | Director for Metal Industry D G S I |
| 4. Mr. Sahat Nainggolan | Head of the PSP2IK Project |
| 5. Mr. Bosmar Sembiring | Secretary of the PSP2IK Project |
| 6. Mr. Ayun Runlan | Coordinator of the HRD-CEVEST PSP2IK Project |
| 7. Mr. Sukardjo | Expert of the PSP2IK Project |
| 8. Mr. S. Mailoa | - ditto - |
| 9. Mr. Sudjana | - ditto - |
| 10. Mr. Mulyadi S. | Counterpart Expert CEVEST-EST |
| 11. Mr. Chr. Rogahang | Sub Coordinator HRD-CEVEST PSP2IK Project |
| 12. Mr. Simon Duapadang | - ditto - |

13. Mr. M. Noeryanto S. Head Section Directorate Metal Industry
DGSJ
14. Mr. Agus Trimurtjahjo - ditto -
15. Mr. I Made Dharma - ditto -

(日本側)

| | | |
|-------|--------------|------------------------------|
| 専 門 家 | 隅 田 速 雄 | C E V E S T リーダー |
| | 野 福 文 徳 | C E V E S T 調整員 |
| | 北 端 辰 昭 | C E V E S T - E S T (技術研修管理) |
| | 西 村 哲 明 | " (") |
| | 佐々木 喬 志(短期) | " (技術研修計画・調整) |
| | 朝 岡 康 二(") | " (技術指導・助言) |
| | 野 田 卓 二(") | " (非鉄鋳造理論) |
| | 菊 池 鉄 男(") | " (非鉄鋳造実技) |
| | 岩 崎 重 義(") | " (鍛造理論) |

日本大使館

島 田 一等書記官

J I C A インドネシア事務所

遠 藤 英 夫 所 長
佐 藤 幹 治 次 長
田 口 徹 所 員

2. 要約(エバリュエーション調査)

本調査団は、昭和62年11月1日から15日まで5日間にわたり、「イ」工業省小規模工業総局トリスラ総局長を始めとする「イ」側関係者と、本プロジェクトのエバリュエーション及び延長問題に関する協議を行った。両国関係者合同で作成したジョイント・エバリュエーションレポートは、ほぼ原案通り承認され、また延長問題については一年間のフォローアップ協力を行うことで双方の合意を得、15日トリスラ総局長及び隅田田長との間で、ジョイント・エバリュエーションレポート及びミニッツ(協力期間延長)の署名交換を行った。

(1) エバレポートの骨子

- ① 経営研修のトレーナー養成コース及び技術研修を除いては、R/Dに記載された事業はほぼ技術移転が完了した。
- ② 昭和63年2月をもって、経営研修事業、調査研究事業及び指導相談事業の協力は終了するが、以後はインドネシア側がCEVEST(小規模部門)の施設・機材を活用し、上記活動を実施してゆく。
- ③ インドネシア側が、経営研修・トレーナー養成コース及びアセアン域内研修(RTP)をフォローアップ協力期間内(一年間)に実施する場合、日本側より協力する用意がある。
- ④ 技術研修(非鉄鑄造・鍛造技術)の技術移転は未完了の為、更に一年間のフォローアップ協力が必要である。
- ⑤ ラタン家具製造、既製服製造及び食品包装技術については、技術協力の対象とはしない。

(2) ミニッツの骨子(フォローアップ協力)

ジョイント・エバレポートにおける日・イ双方の合意事項に基づき、昭和63年2月16日より昭和64年2月15日まで一年間のフォローアップ協力を行うこととなった。協力期間内の技術協力計画は下記のとおり。

① 技術研修

- 1) 非鉄鑄造コース 1回(1.5ヶ月)
- 2) 鍛造コース 1回(1ヶ月)

※② 経営研修・トレーナー養成コース

※③ アセアン域内研修(RTP)

※ ②, ③の実施に関しては、日・イ双方で更に協議を行う。

3. 調査結果概要

3-1 「イ」側との協議

(1) ラタン家具、食品包装並びに既製服製造に係る技術協力

昭和61年12月に提出された日本側長期専門家とCEVEST-EST部門カウンターパート合同作業による技術研修に関するスタディレポート(STUDY REPORT ON TECHNICAL TRAINING FOR DEVELOPMENT OF THE EST-CEVEST)により、非鉄鑄造、鍛造、ラタン家具、食器包装並びに既製服製造の5業種(OBJECTIVE TRADE)がCEVESTプロジェクトの枠組みの中での技術研修の対象として報告されたが、昭和62年3月派遣の巡回指導チームとイ側との協議の結果、日伊双方が直面している時間的・予算的制約、我国国内事情を勘案し非鉄鑄造・鍛造の2業種に対し技術協力を実施すべく決定した経緯がある。しかしながら今次エバリュエーションチームの派遣に先立ち、イ側よりプロジェクト延長問題に関し、延長期間を2年間としその間に現在の非鉄鑄造・鍛造の技術研修に加うるに新たにラタン家具他について協力してほしい旨の要請がなされたためその取扱いを検討した結果、現時点においてもCEVEST-ESTプロジェクトの枠組みの中での対応は極めて困難であるとの判断によりイ側に対しラタン家具、食品包装並びに既製服製造のいずれの業種も技術協力の対象となり得ない旨再度伝達することとした。昭和62年11月12日トリスラDGS I総局長に会見し、我方提案の1年間の延長期間においては非鉄鑄造及び鍛造コースを各1回実施することが技術研修分野における日本側の対応としては最大限のものであり、ラタン家具他の実施は困難である旨我方国内事情をも踏まえ詳細に説明を行ったところ、幸いにも同総局長の理解を得るところとなったため、エバリュエーションレポート及びM/Dにてラタン家具等3業種に係る技術協力はフォローアップ期間中においても実施しない旨の確認を行った。

しかしながら、イ側のラタン家具等に対する協力要請には極めて真摯なものがあるところ、CEVESTプロジェクトとは別に新規のプロジェクトタイプ技術協力案件として今後、日本側に対し要請があるものと思われる。

(2) トレーナー養成コース及びアセアン域内研修の実施

イ側に対し、経営研修の内協力開始以来、未実施のコース、例えばトレーナー養成コース等について、フォローアップ期間中にデモンストレーション・コースとして実施する可能性について質したところ、イ側よりは、「経営研修の重要性は十分認識している。今日まで未実施であることは誠に遺憾であるが、これは財政事情によるものであり、仮に日本側より特段の協力(研修経費の日本側負担)が得られるならば、トレーナー養成コースを数回程度実施することを検討したい。移転された技術の活用の観点から、詳細検討の上日本側に対し早急に実施可否につき回答したい。」との回答を得た。一方、イ側よりアセア

ン域内研修（RTP）の実施を検討しているが、この場合日本側の協力は得られるかとの質問があった。これに対し、日本側よりRTPはR/Dにも明記されていることもあり、イ側がフォローアップ期間中における実施を検討するならば、日本側としても協力する（研修実施経費の日本側負担）用意がある、但し、イ側責任によりRTPコースがほぼ全面的に運営されることになるところ、実施可否については、あらゆる角度から慎重に検討してほしい旨回答しおいた。尚、イ側よりは、トレーナー養成コース（複数回）及びRTP実施の場合、必要な所与の技術移転は、ほぼ完了しているものの、トレーナーコース及びRTP実施の経験が全くない為、技術研修の長期専門家に加え引き続き経営研修分野の我方長期専門家1名の協力を得たい旨の要望があった。これに対し、日本側よりはイ側事情も理解しうるので、これらコースの実施の場合には、長期専門家の派遣可否につき、検討したい旨、回答しおいた。

(3) 技術研修非鉄鑄造コースの実施

技術研修の非鉄鑄造コースは当初の予定通り、昭和62年11月16日（月）に開講した。開講式には、研修生20名（計画は20名）を含む約70名の日・イ関係者が出席、イ側よりはビントールD G S I官房長、日本側よりは塚本エバチームアドバイザー（中小企業庁取引流通課長兼国際室長）がそれぞれを代表し祝辞を述べたが、席上イ側より、日本側の多大の協力に感謝する旨の最大級の謝辞がよせられた。

なお、鍛造コースは昭和63年1月11日より2月6日まで1ヶ月間実施される予定であり、非鉄鑄造コースの実施と平行して準備が進められている。

3-2 その他

新規要請プロジェクト（刃物産業共同利用訓練施設）

イ側より、かねてよりプロジェクト方式技術協力として要請のある刃物産業共同利用訓練施設プロジェクトについて、日本側よりD G S Iに右要請の詳細を問うたところ、現在刃物に限定することなく、鑄鍛造分野他を加えた協力内容にて検討中であり、昭和62年12月中に日本側にプロジェクト計画書を提示したい旨の説明にとどまったため、要請背景、内容等の詳細を把握するに至らなかつた。尚、日本側よりは、本件プロジェクトに関心を有しているが、去る昭和62年6月の年次協議において、調査対象案件として取り上げられていないこともあり、調査チーム派遣に至るまでには、今後日・イ間において協議が必要である旨伝達しおいた。

なお、イ側事情として推察しうるには、要請内容の変更に加うるにD G S Iには鑄・鍛造分野を担当する機械金属局の他に繊維皮革局、建材局、食品局等があり、かねてより我方に対し協力方要請越している既製服、ラタン家具、食品包装を所掌している事もあり、今後小

規模工業総局として、新規鋳・鍛造プロジェクトを現行CEVESTプロジェクトの後継プロジェクトとして位置付け、日本側に対し協力方要請するまでには若干の部内調整を要するものと思われる。

4. 今後の課題（フォローアップ協力）

今回のエバリュエーションの結果に基づき、昭和64年2月15日まで一年間協力期間を延長し、フォローアップ協力をを行うこととなった。

フォローアップ期間中の主要課題として以下の事情が挙げられる。

4-1 技術研修

昭和63年度研修実施に際し、昭和62年度に各一回実施する非鉄鋳造コース及び鍛造コースの経験を踏まえ、カリキュラム改善、テキスト改訂、機材の整備等を図ると共に、必要な措置（短期専門家の派遣、C/Pの受入れ等）を講ずる。

尚、朝岡短期専門家（沖縄県立芸術大学教授、派遣期間、62年10月19日～11月18日）より、インドネシアにおける小規模工業の現状、鋳鍛造技術の現状等に関するレポートが提出された。（別添I-⑤）昭和63年度技術研修の実施に際し、これら現状を踏まえた上、「イ」側カウンターパートと共に研修計画を策定する必要がある。

4-2 トレーナー養成コース、及びアセアン域内研修

これら事業の実施については、今後「日」・「イ」双方で更に協議を行うこととなったが、各々R/Dに記載されながらもこれ迄未実施であったことから、63年度実施するにあたって様々な問題が予想される。今後、「イ」側より提出される実施計画書を詳細に検討の上、「日」側より可能な限りの協力（研修経費の日本側負担、専門家の派遣等）を行うこととする。

Ⅱ 計画打合せ調査（フォローアップ協力）

1. 計画打合せ調査団の派遣

1-1 調査団派遣の経緯と目的

昭和62年11月に派遣されたエバリュエーション調査団は、「イ」側関係者と本プロジェクトの評価を行い、技術移転が不十分な分野に関し、協力期間を昭和64年2月15日まで一年間延長しフォローアップ協力をを行うことで「イ」側と合意した。

昭和63年1月、「イ」側よりフォローアップ協力期間内において、技術研修等6コースの実施に関し、「日」側に協力要請越した。これを受けて、「イ」側と63年度年次計画を策定する為、昭和63年4月計画打合せ調査団を派遣した。

1-2 調査団の構成

| | | |
|-----|--------|--------------------|
| 団 長 | 総 括 | 坂 田 武 穂 |
| | | 国際協力事業団鉾工業開発協力部調査役 |
| 団 員 | 技術協力計画 | 清 沢 貞 二 |
| | | 通産省中小企業庁指導部取引流通課 |
| | 業務調整 | 石 川 武 |
| | | 国際協力事業団鉾工業開発協力部 |
| | | 鉾工業開発技術課 |

1-3 調査団の日程表

| | | | |
|-------|----|-------|-----------------------------------------------|
| 昭和63. | 4. | 25(月) | 成田——ジャカルタ(GA873) |
| | 4. | 26(火) | 大使館, JICA事務所表敬 CEVEST視察 |
| | 4. | 27(水) | 工業省小規模工業総局(DGSI)表敬 打合せ(ピンタールジャムール官房長以下12名) |
| | 4. | 28(木) | トリスラDGSI総局長表敬 打合せ |
| | 4. | 29(金) | M/Dの最終案作成 |
| | 4. | 30(土) | M/Dの署名交換 |
| | 5. | 1(日) | ジャカルタ——成田(CX710, CX500) |

1-4 主要面談者

| 氏名 | 所属先及び職名 |
|----------------------------|-----------------------------------------------------------|
| (インドネシア側) | |
| 1. Mr. Trisura Suhardi | Director General for Small Industries |
| 2. Mr. Bintaldjemur | Secretary of the Directorate General for Small Industries |
| 3. Mr. F. Lengkong | Director for Metal Industry |
| 4. Mr. Hidayat Suwandi | Bureau for International Relation, Ministry of Industry |
| 5. Mr. Sahat M. Nainggolan | Head of the PSP2-IK Project |
| 6. Mr. Ayun Runlan | Secretary of the PSP2-IK Project |
| 7. Mr. Made Dharma H | Coordinator of the HRD-CEVEST PSP2-IK Project |
| 8. Mr. Sukardjo | Expert of the PSP2-IK Project |
| 9. Mr. S. Mailoa | - ditto - |
| 10. Mr. Effendi Sirait | - ditto - |
| 11. Mr. Mulyadi S | Counterpart Experts CEVEST-EST |
| 12. Mr. Simon Duapadang | Sub Coordinator HRD-CEVEST PSP2-IK |
| 13. Mr. Chr. Rogahang | - ditto - |
| 14. Mr. Zulkifli Rasjid | - ditto - |

(日本側)

| | | |
|-------|-----------|------------|
| 専門家 | 北端辰昭 | CEVEST-EST |
| | 西村哲明 | " |
| | 野福文徳 | CEVEST調整員 |
| | 佐々木喬志(短期) | CEVEST-EST |
| 日本大使館 | 島田 | 一等書記官 |

JICAインドネシア事務所

| | | |
|--|------|----|
| | 北野康夫 | 所長 |
| | 佐藤幹治 | 次長 |
| | 田口徹 | 所員 |

2. 要 約

2-1 フォローアップ協力にかかる「イ」側からの要請（別添Ⅱ-②のとおり）

昭和62年11月に派遣されたエバリュエーション調査団は、本プロジェクトの協力期間を1年間延長し、フォローアップ協力を実施することで、「イ」側と合意した。

その後、昭和63年1月に「イ」側より、フォローアップ協力期間内に技術研修、トレーナー養成コース、アセアン域内研修を実施することに対し、「日」側に協力要請越した。

要請内容は、下記のとおりである。

| | |
|---------------|------------------|
| 技 術 研 修 | 非鉄鑄造コース（1.5ヶ月） |
| | 鑄造コース（1ヶ月） |
| トレーナー養成コース | TQC/QCC（1ヶ月）×2回 |
| | AMTT（2ヶ月） |
| | （マーケティング指導者養成研修） |
| アセアン域内研修（RTP） | （2週間） |

2-2 「イ」側、「日」側の合意事項（別添Ⅱ-①のとおり）

上記「イ」側からの要請を受け、本調査団は「イ」側関係者と協議を行い、下記のとおり合意に達した。

(1) 昭和63年度活動計画（5コース実施）

| | |
|------------------------|----------|
| 技術研修（非鉄鑄造コース） | 1.5ヶ月×1回 |
| “（鍛造コース） | 1ヶ月×1回 |
| トレーナー養成コース（品質管理） | 1ヶ月×2回 |
| “（AMTT、マーケティング指導者養成研修） | 2ヶ月×1回 |

アセアン域内研修については、その実施に関し引き続き双方で協議を行う。

(2) 短期専門家

| | |
|------------|----|
| 技術研修 | 9名 |
| トレーナー養成コース | 3名 |

(3) 機材の供与

63年度機材申請リスト（760万円分）について、「日」「イ」双方で最終的な仕様等を検討する。

(4) 研修員の受入れ

63年度研修員4名（技術研修非鉄鑄造コース2名、鍛造コース2名）について受入れの予定。

(5) ローカルコストの「日」側負担（別添Ⅱ-③参照）

アセアン人造りプロジェクト技術者養成対策費4,200万円を5コース実施の為、投入する。

(6) 「イ」側カウンターパートの配置

| | |
|-----------------------------|----|
| 技術研修（非鉄鑄造コース） | 2名 |
| 〃 （鍛造コース） | 2名 |
| トレーナー養成コース（品質管理コース） | 2名 |
| 〃 （AMTT） | 2名 |

3. 調査結果概要

3-1 「イ」側との協議内容

(1) 研修コースの実施（各コースのカリキュラム（案）別添Ⅱ-④）

a. 技術研修は62年度同様、非鉄鑄造、鍛造各コース1回を実施する。尚、非鉄鑄造コースについては新たに金型、木型鑄造実技を導入し、期間を延長して1.5ヶ月間とする。

b. 「イ」側より要請のあったトレーナー養成コースTQC/QCC（Total Quality Control/Quality Control Circle）コースについては、「イ」国小規模工業の現状に鑑み、TQC/QCC導入の前段階であるQC（品質管理）コースに内容を変更して実施する。

TQC/QCCは言うまでもなくQCの考え方を財務、労務、経営など全社機能に拡大しようと言うものであり、TQC導入の前提となるのがQCの確立である。

インドネシアの工業、特に小工業の分野では国際平均的に見てもQC面での遅れが著しい。この事は、TQCを受け入れる土壌がまだ育っていない事を意味する。QCの普及それ自体が困難な状況にあるが、TQCの導入を図る前にまずQCの徹底を指導する必要がある。従って、本研修においては主眼をQCに置き、QCの延長線上の参考としてTQCを紹介する程度にとどめることとする。

c. トレーナー養成コースAMTT（Achievement Motivation Trainers Training）コースは、小工業者の経営としての動機付けや意識高揚を図ることを目的として、インドネシア工業省が実施しているインドネシア独特のO.J.T.研修である。今回の研修については、日本人専門家の技術移転対象分野として、マーケティング理論を導入し、併せて日本の中小企業施策の紹介も行う。

d. アセアン域内研修（RTP）の実施については、研修テーマの設定、運営体制等検討すべき事項があるため、更に「日」「イ」間で協議を続けることとした。

(2) 研修の対象

小規模工業普及員（Extension Service Officer）

(AMTTコースでは、一部民間の小規模企業経営者が研修に参加する予定である。)

(3) 研修の目的

- ・技術研修 一知識を自己確認するための実習
一 小規模工業者を指導する上で不可欠な技能の習得
- ・品質管理コース 一近い将来、インドネシアの小規模工業に適用しうる品質管理に関する知識を習得する。
- ・AMTTコース 一企業家意識高揚、マーケティング等に関する手法を習得する。

(4) 短期専門家の派遣

フォローアップ協力期間内の研修コース5コースの実施については、CEVEST-E
STに長期派遣中の北端、西村両専門家が軸となり、これに対し日本より必要な時期に短
期専門家を派遣し円滑なる実施を支援することとなる。

63年度計画として、調査団より、当該専門家のリクルートが可能な場合に、技術研修
9名、トレーナー養成コース3名の短期専門家を派遣する旨回答し、「イ」側もこれに同
意した。

技術研修については、62年度実施した成果を踏まえ、63年度計画を策定した。これに
基づき、下記のとおり短期専門家の陣容強化を図った。

[62年度短期専門家派遣実績]

| | | | |
|----------|---------|----|-----|
| (共 通) | 計画・調整 | 1名 | |
| | 技術指導・助言 | 1名 | |
| (非鉄鑄造) | 鑄造理論 | 1名 | |
| | 鑄造実技 | 1名 | |
| (鍛 造) | 鍛造理論 | 1名 | |
| | 鍛造実技 | 1名 | 計6名 |

[63年度派遣計画]

| | | | |
|----------|----------|----|-------------|
| (共 通) | 計画・調整 | 1名 | |
| | 技術指導・助言 | 1名 | |
| | ※鑄鍛造デザイン | 1名 | |
| (非鉄鑄造) | 鑄造理論 | 1名 | |
| | 砂型鑄造実技 | 1名 | |
| | ※金型鑄造実技 | 1名 | |
| | ※木型鑄造実技 | 1名 | |
| (鍛 造) | 鍛造理論 | 1名 | |
| | 鍛造実技 | 1名 | 計9名(※印は新分野) |

また、トレーナー養成コース品質管理コースに関し、2名の短期専門家を派遣する計画であるが、内1名はJICAのシンガポール生産性向上プロジェクト及びインドネシア電子工学ポリテックプロジェクトにおいて品質管理分野の技術移転の経験を重ねており、今回の品質管理コースではこれら他プロジェクトの経験を踏まえ、インドネシア小規模工業の実態に即したカリキュラムを作成し昭和63年10月及び12月の2度に渡り研修を実施する。特に、1回目のコース実施後にカウンターパートと共同で評価を行い、2回目のコース内容に反映させる。

トレーナー養成コースAMTTコースについては、同コースのカリキュラムの内、マーケティング理論分野に短期専門家を派遣し、技術移転を図る。

(5) カウンターパートの配置

調査団より、日本のプロジェクト方式技術協力の目的は、カウンターパートに対する日本人専門家からの技術移転であり、各研修コースに関し、研修コース開催準備の為日本人短期専門家が派遣されるまでに、必ずカウンターパートを配置する様要請した。これに対し、「イ」側より技術研修に4名、トレーナー養成コースに4名、計8名のカウンターパートを、配置するとの回答があった。

尚、技術研修のカウンターパート4名は、62年度と同一人物であると「イ」側より説明があった。

(6) 研修員の受入れ

昭和62年11月に署名されたM/Dにある通り、技術研修のカウンターパート4名を受入れることとする。

更に「イ」側より、トレーナー養成コース2名、行政研修2名の受入れ要請があったが、調査団より現時点では受入れ枠が4名であり、今後「日」側の調整により受入れ枠が拡大した場合、「イ」側と協議を行う旨、回答した。

(7) 機材

技術研修については、62年度に供与された機材に加え、非鉄鑄造コースにおいて新たに追加された分野である金型鑄造実技、木型鑄造実技に係る必要機材を供与する。鍛造コースについては、スプリングハンマー等、62年度研修を実施した結果、更に補充が必要と判断された機材を供与する。

また、トレーナー養成コースについては、今後カリキュラムを策定するに従い、必要とされる機材を可能な限り現地購入する。

尚、現地購入の可否については、西村長期専門家、佐々木短期専門家を中心に「イ」側カウンターパートと調査を行っている。

(8) ローカルコストの「日」側負担（別添Ⅱ-③参照）

調査団より、インドネシア工業省の財政逼迫の事情を理解し得るが、研修コース実施に際し、最大限運営予算の確保に努力してほしい旨、申し入れた。これに対し、「イ」側より、63年度においても財政事情は悪く、62年度同様「日」側より研修コース運営にかかる財政支援の要請があった。

「日」側としては、本プロジェクトにおける技術移転の達成が「日」「イ」双方にとって最重要課題であるとの認識を示し、最大限の財政支援を行う旨回答した。

3-2 その他の調査事項

(1) CEVEST-EST研修運営経費（「イ」側負担、「日」側負担）（別添Ⅱ-③）

(2) AV機材、教材について

昭和61年度に、視聴覚教材整備を目的としてビデオソフト30本（2,000万円）を供与した。

同ソフトは、中小規模工業の発展、生産性向上等に関する内容のもので、昭和62年度の技術研修カリキュラムに組み入れる予定であったが、同研修は実施に至るまでの準備期間が非常に短期（昭和62年6月に技術研修関連調査団を派遣してから、約4ヶ月間）であった為、同ソフトを活用するに至らなかった。

しかしながら、昭和63年度における研修コース5コースの実施に際しては、同ソフトの内容が各コースに共通して活用できると考えられるところ、「イ」側及び専門家チームと共同で、活用の為のカリキュラム作成に関し協議を行った。

また、専門家チームより同ソフトの活用と合わせて、既供与のAV機材を活用し、技術研修の実習を行うプランが提案された。同プランでは、ワークショップにおける実習をビデオに収録し、翌日の午前中に再生し研修生の間で問題点、改善方法等に関し協議を行い、これを次の実習に反映させていくものである。この方法により、理論習得、実技、評価のサイクルを確立することが可能となり、生産性向上の概念習得に貢献できると考えられる。

(3) 「日」「イ」間のミーティングの開催について

フォローアップ協力期間中、長期、短期専門家計14名が活動を行うが、円滑に研修を実施する為には、専門家チーム内のコミュニケーションの必要性はもとより、日本人専門家とカウンターパートとのコミュニケーションの深化をも図る必要がある。この点に関し、調査団より、研修コースの開催準備、実施期間中は定例的に合同ミーティングを行う様「イ」側に対し要請し、同意を得た。

4. 調査団所見

4-1 今後のスケジュール

本調査団の派遣により、昭和63年度の実施計画が策定されたが、フォローアップ協力が終了する昭和64年2月15日までの9ヶ月間に5研修コースを実施することとなり、各研修コースの開催準備、カウンターパートトレーニング、コースの実施等を考慮すると、かなりの過密スケジュールが予想される。

今後は、JICA本部、専門家チーム、JICA事務所と「イ」側が密接な連絡を図り、遅滞なく研修コースが実施される様配慮する必要がある。

4-2 CEVEST-ESTの今後について

本プロジェクトは、昭和64年2月15日をもって協力を終了するが、終了後について、「イ」側よりCEVEST-EST(フェーズⅡ)の実施について、協力要請があった。本件に関しては、新規プロジェクトの実施とみなされる為、昭和63年度の年次協議の場において、「日」、「イ」政府間で討議されるべきものであり、この場では言及できない旨説明し、「イ」側よりフェーズⅡプロジェクトの実施に関し、要望があった事実をミニッツに記載することで双方合意した。

本プロジェクトの今後については、昭和63年7月に行われる年次協議の結果を踏まえ、対応していくこととなる。

附 属 資 料

I エバリュエーション調査関連

① Joint Evaluation Report (Nov., 1987)

② Minutes of Discussion (Nov., 1987)

(1年間延長, フォローアップ協力)

③ Minutes of Discussion (Aug., 1986)

(R/Dのフレームワーク変更)

④ R/D (Feb., 1983)

⑤ 技術研修関連報告 (Dec., 1987)

I-① Joint Evaluation Report

JOINT EVALUATION REPORT

ON THE TECHNICAL COOPERATION

PROJECT FOR THE CENTER

FOR VOCATIONAL AND

EXTENSION SERVICE TRAINING

NOVEMBER 1987

JAKARTA, INDONESIA

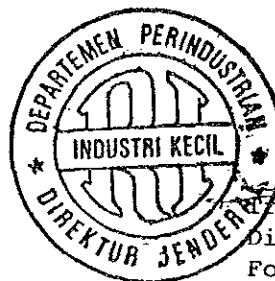
MUTUALLY ATTESTED AND SUBMITTED
TO ALL CONCERNED

Jakarta, Indonesia

November 15, 1987

隅田栄光

Eiryo Sumida
Leader,
Japanese Evaluation Team,
Japan International
Cooperation Agency,
Japan



[Signature]
Pisura Suhardi
Director General
For Small Industries,
Ministry of Industry,
The Republic of Indonesia

Discussion meeting between the evaluation team of the Japan International Cooperation Agency (JICA) and the Indonesian evaluation team on the evaluation of the Technical Cooperation Project for the Center for Vocational and Extension Service Training.

Date : November 15, 1987

Place : Directorate General for Small Industries, Ministry of Industry

Attendance :

JAPANESE PANEL

JAPANESE EVALUATION TEAM :

1. Mr. E. Sumida, Leader, Japanese Evaluation Team.
2. Mr. H. Tsukamoto, Special Advisor, Japanese Evaluation Team.
3. Mr. T. Ishikawa, Member, Japanese Evaluation Team.

JICA INDONESIA OFFICE :

1. Mr. Taguchi, Staff, JICA Indonesia Office

JICA EXPERTS :

1. Mr. H. Sumida, Leader, Experts - Team of CEVEST
2. Mr. T. Kitabata, Expert, CEVEST - EST
3. Mr. T. Nishimura, Expert, CEVEST - EST
4. Mr. T. Sasaki, Expert, CEVEST - EST
5. Mr. K. Asaoka, Expert, CEVEST - EST
6. Mr. T. Noda, Expert, CEVEST - EST
7. Mr. T. Kikuchi, Expert, CEVEST - EST
8. Mr. S. Iwasaki, Expert, CEVEST - EST

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INDONESIAN PANEL

1. Mr. Trisura Suhardi Director General for Small Industries
2. Mr. Bintaldjemur Secretary of the Directorate General for Small Industries
3. Mr. F. Lengkong Director for Metal Industry DGSI
4. Mr. Sahat Nainggolan Head of the PSP2IK Project
5. Mr. Bosmar Sembiring Secretary of the PSP2IK Project
6. Mr. Ayun Runlan Coordinator of the HRD-CEVEST PSP2IK Project
7. Mr. Sukardjo Expert of the PSP2IK Project
8. Mr. S. Mailoa -ditto-
9. Mr. Sudjana -ditto-
10. Mr. Mulyadi S. Counterpart Expert CEVEST-EST
11. Mr. Chr. Rogahang Sub Coordinator HRD-CEVEST PSP2IK Project
12. Mr. Simon Duapadang -ditto-
13. Mr. M. Noeryanto S. Head Section Directorate Metal Industry DGSI
14. Mr. Agus Trimurtjahjo -ditto-
15. Mr. I Made Dharma -ditto-

I. INTRODUCTION

1. Objective

The Japanese Evaluation Team organized by the Japan International Cooperation Agency (JICA), headed by Mr. Eiryo Sumida, visited the Republic of Indonesia from November 10 to 18, 1987 in order to evaluate jointly with the Indonesian Evaluation Team organized by the Director General for Small Scale Industries, Ministry of Industry, headed by Mr. Trisura Suhardi, the Japan-Indonesia Technical Cooperation Project on the Center for Vocational and Extension Service Training (hereinafter referred to as CEVEST) which has been carried out for five (5) years on the basis of the Record of Discussions signed on February 16, 1983 between the Japanese Implementation Survey Team and Authorities concerned of the Government of the Republic of Indonesia.

Both teams discussed and studied with the Indonesian counterpart personnel concerned and the Japanese experts on a number of aspects regarding the performance of commitments, achievements of the functions of CEVEST and constraints which hampered past activities.

Through careful studies and discussions, both teams summarized their findings and observations as described in the following chapters.

2. Brief Background of the Project

In January 1981, Mr. Zenko Suzuki, the then Prime Minister of Japan, visited ASEAN countries and proposed the ASEAN Human Resources Development Project for the purpose of developing human resources necessary in ASEAN countries.

Upon the proposed, both governments had a series of discussions in order to decide the program of the technical cooperation project. As a result of the discussions, both governments agreed to implement the program of developing human resources to reinforce the basis of industry in Indonesia by the technical cooperation and grant aid of the government of Japan.

On July 9, 1983, the Exchange of Notes (E/N) being concluded between the two governments, in Bekasi about 30 km east of the heart of Jakarta City, the Center was constructed with the granted sum of ¥ 3,000 million consisting of an administrative building, two training buildings, two dining halls, training facilities, etc.

The Government of Japan through JICA sent the preliminary survey team to Indonesia three times in August, November 1981, and October 1982, for the purpose of working out the details of the project with the authorities concerned of the Government of Indonesia.

After careful studies and discussions, both governments agreed to implement the technical cooperation program which was composed of two departments, (A) training of extension service workers, (B) training of vocational training workers, in the Center for Vocational and Extension Service Training (CEVEST) which was newly constructed by the grant aid of the Government of Japan.

The objectives of Extension Service Training Department of CEVEST (hereinafter referred to as CEVEST-EST) were the three activities, (1) to provide and conduct training courses for extension service workers, entrepreneurs and government officials, (2) to enhance surveys on small industries development activities in selected areas, (3) to enhance guidance, consultation and advisory service activities for small industries, which were covered by the technical cooperation of the Government of Japan.

Meanwhile, the Japanese Implementation Survey Team organized by JICA visited Indonesia from February 8 to 18, 1983 for the purpose of working out the details of the Technical Cooperation Program for the Project on CEVEST.

After careful studies and discussions, both parties agreed to recommend to their respective Governments the implementation of the project as described in the "Record of Discussions" signed on February 16, 1983 between the Japanese Implementation Survey Team and Authorities concerned of the Government of the Republic of Indonesia. This recommendation was accepted by both governments and, as a result, the technical cooperation program was started.

3. Chronological review of the project

| | |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1981 January | The then Prime Minister Mr. Zenko Suzuki proposed ASEAN Human Resources Development plan |
| March | The first preliminary meeting of ASEAN Human Resources Development Project held in Tokyo |
| August | Despatch of preparatory survey team |
| October | The second preliminary meeting of ASEAN Human Resources Development Project held in Jakarta |
| November | Despatch of the second preparatory survey team |
| 1982 October | Despatch of the preliminary survey team |
| December | Despatch of the detailed survey team |
| 1983 February | Implementation Survey Team signing on the Record of Discussions (R/D) and commencement of the technical cooperation |
| March | Acceptance of the first counterparts for training in Japan |
| August | Despatch of 5 long-term experts |
| December | Despatch of the first technical guidance team |
| 1985 March | Despatch of the second technical guidance team |
| August | . Despatch of 3 long-term experts . Formal hand-over of CEVEST buildings and facilities from the Government of Japan to the Government of Indonesia . Formal inauguration of CEVEST |
| 1986 February | Despatch of a long-term expert |
| August | Despatch of the third technical guidance team |
| 1987 February | Despatch of 2 long-term experts |
| March | Despatch of the fourth technical guidance team |
| June | Despatch of the fifth technical guidance team |
| <hr/> | |
| November | Despatch of the evaluation team |

II. METHODOLOGY OF EVALUATION

1. In order to evaluate the past performance and achievement both quantitatively and qualitatively, following items are adopted as reference.
 - (1) The Record of Discussions
 - (2) The official request made by the Government of Indonesia with respect to expert services, training of counterpart personnel in Japan and provision of equipment by means of A-1, A2-3, and A-4 Forms respectively.
 - (3) Minutes of Meetings and the Annual Work Plans agreed or accepted in the course of implementation of project.
2. For the purpose of evaluation, both teams discussed various aspects of the Project and observed the buildings, machinery, equipment, facilities and utilities made available for the Project.

III. RESULT OF EVALUATION

1. Building and Facilities

Upon the signing of Exchange of Notes on July 9, 1983, the construction of the Center for Vocational and Extension Service Training was started. The Center consisting of an administrative building, two training buildings, two dining halls and training facilities was completed in March, 1985 and handed over from the Government of Japan to the Government of Indonesia in August, 1985.

Meanwhile, the dormitories, staff houses, lecturer houses and workshops for the technical training were constructed by the Indonesian Government.

(Remarks)

In spite of the limitation of the national budget of the Government of Indonesia, the effort made by the Indonesian side for the construction of the dormitories, staff houses and workshops, etc. is highly appreciated.

2. Staffing

(1) When the building of CEVEST was handed over from the Japanese side to the Indonesian side, the number of staff is not sufficient to operate CEVEST-EST. However, the situation has been improved year by year and at present CEVEST-EST has 36 counterparts, 11 sub-counterparts and 22 supporting staff.

(2) The list of counterpart personnel as of October, 1987 is in Annex 1.

(Remarks)

(1) The Directorate General for Small Industries (hereinafter referred to as DGSI) has been largely contributing to the smooth implementation of CEVEST-EST.

(2) Attempts of the DGSI to increase number of the project personnel are highly appreciated.

(3) Some counterpart personnel hold two posts at DGSI and CEVEST. For the promotion of the effective technology transfer, it is desired that each counterpart personnel belongs exclusively to some specialized section.

3. Management and Administration

All administrative and managerial services especially for operating the training courses are being provided by DGSI, Ministry of Industry.

The meetings of the Joint Committee, which consists of delegates from Ministry of Industry, Ministry of Manpower, Japanese side and other institutions concerned, were held for the smooth implementation of the project. The organization chart of CEVEST is in Annex 2.

(Remarks)

(1) Thanks to the effort made by the Indonesian side, the management and administration of CEVEST-EST has been carried out without much difficulty.

(2) The Joint Committee is well organized and very useful for the smooth and effective implementation of the project. The results of the meetings were reflected in DGSJ and JICA's efforts to accelerate the pace of their activities.

(3) The further effort by the Indonesian side is expected to be made for the speedy custom clearance of the machinery and equipment provided by the Japanese Government in order to carry out the program effectively in a limited cooperation period.

(4) In addition to (3) above, the further effort by the Indonesian side is expected to be made for the timely presentation of A Forms relevant to this Project for the smooth and effective implementation of the project.

4. Equipment

Between Jan., 1984 and Oct., 1987, machinery and equipment including those for technical training worth CIF 73,395 thousand yen have been donated by the Japanese Government. (Refer to Annex 3).

The machinery and equipment so far provided have been installed and put on operation under the guidance of JICA experts and local counterparts personnel.

(Remarks)

(1) Although some AV teaching materials have not been effectively used yet, office equipment has been fully utilized for its purpose.

(2) As for the equipment for technical training, before the training courses start, the sufficient guidance of JICA experts is necessary to put them on operation by local counterpart personnel.

(3) The maintenance system should be established and improved.

5. Japanese Experts

JICA has dispatched eleven (11) long term experts and five (5) short term experts. (Refer to Annex 4). In addition, eleven (11) JICA teams were also dispatched in connection with the project (Refer to Annex 5).

Presently two (2) long-term experts and five (5) short-term experts are being dispatched for the implementation of technical training in the fields of non-ferrous casting and ferrous forging.

(Remarks)

(1) For the most part, the Japanese experts exerted their effort to provide information on technology transfer, including the introduction of Japanese-style functional training methods. They also performed their roles in all areas of the Project working in close cooperation with Indonesian counterparts.

(2) The Indonesian side has expressed its appreciation of the efforts made by Japanese experts in the CEVEST-EST Project.

(3) Because of the quality of knowledge and expertise possessed by the Japanese STes/LTEs dispatched so far, the development of Indonesian counterparts in various fields of specialization have demonstrated remarkable progress.

(4) From fiscal 1983 to 1987, plans were made to dispatch 11 LTEs to Indonesia. Achievement of this plan has reached 100%, whereas the planned dispatch of STes now stands at 83%. (5/6). The combined dispatch of STes/LTEs has reached 94%, and the Indonesian side has expressed their satisfaction with the results.

(5) In spite of the limitation of the budget for equipment and the term of preparation, the effort made by JICA Experts for the implementation of the technical training which was proposed by the Government of Indonesia is appreciated by the Indonesian side.

6. Counterpart training in JAPAN

A total of 24 officials have been sent to Japan either for observation or technical training. (Refer to Annex 6).

(Remarks)

(1) Technical training was carried out at the Small and Medium Enterprise Agency and several other organizations.

(2) Indonesian participants were extremely cooperative when taking part in individual training in various fields and their achievements were outstanding.

(3) The number of participants accepted reached 24 as a result of the efforts exerted by the Japanese and Indonesian sides in the advancement of CEVEST-EST Project. The efforts done by both parties are greatly appreciated.

(4) The Indonesian participants who have returned to their country after training in Japan say that although communication was sometimes difficult, they believe that the experiences gained were beneficial to themselves and to the promotion of CEVEST-EST activities.

(5) The participants found the individual training was effective in deepening their knowledge and experience in specific technical fields.

7. Budget

A summary of the Project cost spent by both Indonesian and Japanese sides respectively is shown in Annex 7.

(Remarks)

The efforts made by both sides for securing the budget is greatly appreciated.

8. Reports and Recommendations

The number of reports submitted to DGSI by the Japanese experts is 9, while recommendation is 4. (Refer to Annex 8).

(Remarks)

(1) The purpose of the reports and recommendations was to encourage DGSI to develop new activities for the project. In general, they were highly evaluated and some of them had a strong impact.

(2) The reports and recommendations encouraged remarkable improvement in CEVEST-EST activities.

9. Textbooks

Textbooks made by Japanese experts have been widely used in the course of CEVEST-EST training. (Refer to Annex 9).

(Remarks)

(1) The textbooks have been effectively utilized in CEVEST-EST activities and have contributed to the fostering of C/P.

(2) The textbooks developed in technical training are also expected to be effectively utilized.

10. Regional Training Program (RTP)

Up to the present, CEVEST-EST is not opened to other nations of all ASEAN member countries through regional training programs.

(Remarks)

(1) It is hoped that for the duration of Japanese technical cooperation, the CEVEST-EST in Indonesia will strengthen and accelerate cooperation among the members of ASEAN countries through the diffusion of methods for the organization of extension service training.

(2) In the event that DGSI conducts CEVEST-EST regional training programs as a part of RPT, the government of Japan, through JICA, is ready to cooperate in the implementation process.

11. Project Accomplishment

According to the framework of the activities of CEVEST-EST agreed by both Indonesian and Japanese sides on the basis of the Record of Discussions and other pertinent papers, the project accomplishment of CEVEST-EST is as follows. (Refer to Annex 10).

11-1 Training Course (Refer to Annex 11).

In addition to the implementation of the training courses in Annex 11, the following activities were performed.

1. A manual for planning and implementation of training courses was made.
2. Training curriculum on the following subjects were developed.

Making of Training Manual

- (1) Preparation of Manuals for Training Program and Implementation
- (2) Preparation of name list of TPL/S

Development of Curriculum for General Training

- (1) Extension Service Worker Generalist Course (TPLG)
- (2) Training TPLS function for Production Management
- (3) Training TPLS function for Marketing
- (4) Manager UPT Course
- (5) Entrepreneurship Course of Small Industry
Achievement Motivation Training Course
- (6) Entrepreneurship Course of Small Industry
sub-contractor Course

3. A report on the systematization of training courses was made.
4. The following teaching materials were developed.

Sub-teaching materials: 1) Production Management I & II
2) Marketing Management

Video teaching aids : 1) Introduction of small-scale
in Indonesia
2) A.M.T.

(Remarks)

(1) Taking into account the severity of financial restrictions, these courses in Annex 11, have been successfully conducted and the same kind of future courses could be carried out only by Indonesian counterpart personnel.

(2) Because of the restriction of the national budget of the Government of Indonesia, the number of training courses, compared with the proposed functional training course in R/D, were extremely limited.

(3) Since commencement of functional training in August, 1985, the trainer training course has not been implemented. In the event that DGSI conducts trainer training course, the Government of Japan, through JICA, is ready to cooperate in the implementation of the course.

(4) The technical training courses on non-ferrous casting and ferrous forging are planned to be implemented one time each in fiscal 1988 in order to ensure the technology transfer.

11-2 Surveys

CEVEST-EST has conducted the following surveys and necessary proposal was made for the improvement of the present situation.

(Pre and Post Training Surveys)

- 1) Training Needs Survey in Sumatra (Mar., 1985)
- 2) Survey concerning Development of sub-contractors in Tegal (Oct., 1984)
- 3) Survey concerning training needs for UPT Managers (Oct., 1985)
- 4) Survey concerning Management Level of Small Industry (1985-1986)

(Survey related to Guidance, Consultation and Advisory Service Activity)

- 1) Survey concerning Guidance and Consultation system for Small Industry (1984-1985)
- 2) Survey Concerning Outline Clusters and Guidance Improvement (1986)
- 3) Survey concerning the linkage of big enterprises and small industries (1987)

(Survey related to technical training need)

Survey on technical standard of clusters in Sukabumi, Surabaya and Bali (1986)

(Remarks)

(1) Through the above-mentioned surveys, necessary fundamental data for planning of training courses, development of teaching aids and advisory service activities were collected and compiled.

(2) The Indonesian counterpart personnel has learned the method of conducting surveys on small scale industries through several experiences. It is considered that the same kind of surveys could be conducted only by Indonesian counterpart personnel when the necessity arises in the future.

11-3 Guidance, Consultation and Advisory Service Activity

The following activities were carried out in relation to Guidance, Consultation and Advisory Service Activity.

- 1) Making up of video on the introduction of CEVEST-EST (1984)
- 2) Survey concerning guidance and consultation (1984, 1985)
- 3) Implementation of the seminar and the study concerning the linkage of big enterprises and small industries (1987)
- 4) Making up of pamphlets on CEVEST-EST

(Remarks)

- (1) The method and contents of guidance, consultation and advisory service was studied through the guidance and consultation system survey which was conducted in 1984 and 1985. The result of this survey could be utilized when the necessity arises.
- (2) A seminar on subcontract system is planned to be held by the middle of February, 1988.

12. Conclusions

- (1) Most activities programmed in the Record of Discussions and other pertinent papers are reaching their final stage. In spite of some unexpected difficulties, the functional training courses except trainer training course have been smoothly conducted by both sides.
- (2) The cooperation in the field of functional training, surveys and guidance activities will be finished in February 1988. The Indonesian side will effectively implement the above activities again by utilizing the facilities and equipment of CEVEST-EST.
- (3) Since commencement of functional training in Aug. 1985, the trainer training course has not been implemented. In the event that DGSI conducts trainer training course, the Government of Japan, through JICA, is ready to cooperate in the implementation of the course.
- (4) As to the technical training courses on non-ferrous casting and ferrous forging, the technology transfer has not been completed yet.
- (5) In accordance with the above observations, it is considered that some technical cooperation subjects in the field of non-ferrous casting and ferrous forging should be followed up for about one (1) year in order to attain their purposes.
- (6) Technical cooperation subjects in the field of rattan furniture, ready-made garments and food packaging are not taken up as the objective trade.

- (7) In the event that DGSI conducts Regional Training Program, the Government of Japan, through JICA, is ready to cooperate in the implementation process.

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ANNEX I.

ASSIGNMENT STATE OF COUNTERPART PERSONNEL (FISCAL 1987/88)

I. COUNTERPART

| <u>Name of Counterparts</u> | <u>Present Post</u> |
|-----------------------------|---------------------|
| 1. H. Sudjana | Expert |
| 2. S. Mailoa | " |
| 3. Soemarno | " |
| 4. Ayun Runlan | Coordinator |
| 5. Christian DJ Rogabang | Sub Coordinator |
| 6. Simon Duapadang | " |
| 7. Drs. Zulkifli Rasjid | " |
| 8. Hendry F. Waluyan | Assistance |
| 9. Erly Pardede | " |
| 10. Firman Jaya | " |
| 11. Ismail Thayeb | " |
| 12. Sardjiman | " |
| 13. Suratman | Staff |
| 14. Linda Rospita | " |
| 15. Drajati Nirmala | " |
| 16. Bambang Supriyono | " |
| 17. K a m t o | " |
| 18. Sukiran | " |
| 19. Rachmat S | " |
| 20. Tholib | " |
| 21. Ismunandar | " |
| 22. Everline | " |
| 23. Budisawitri | " |
| 24. St. Haryam | " |
| 25. R. Rabinun | " |
| 26. Rusdi Dimar | " |
| 27. Lugina | " |
| 28. Sri Rejeki | " |
| 29. M u s a | " |
| 30. Junaidi | " |
| 31. A m i d | " |
| 32. Agus Mahendra | " |
| 33. Sugeng | " |
| 34. Sakwan Karjono | " |
| 35. Donna Mariani | " |
| 36. Azini Yetti Azis | " |

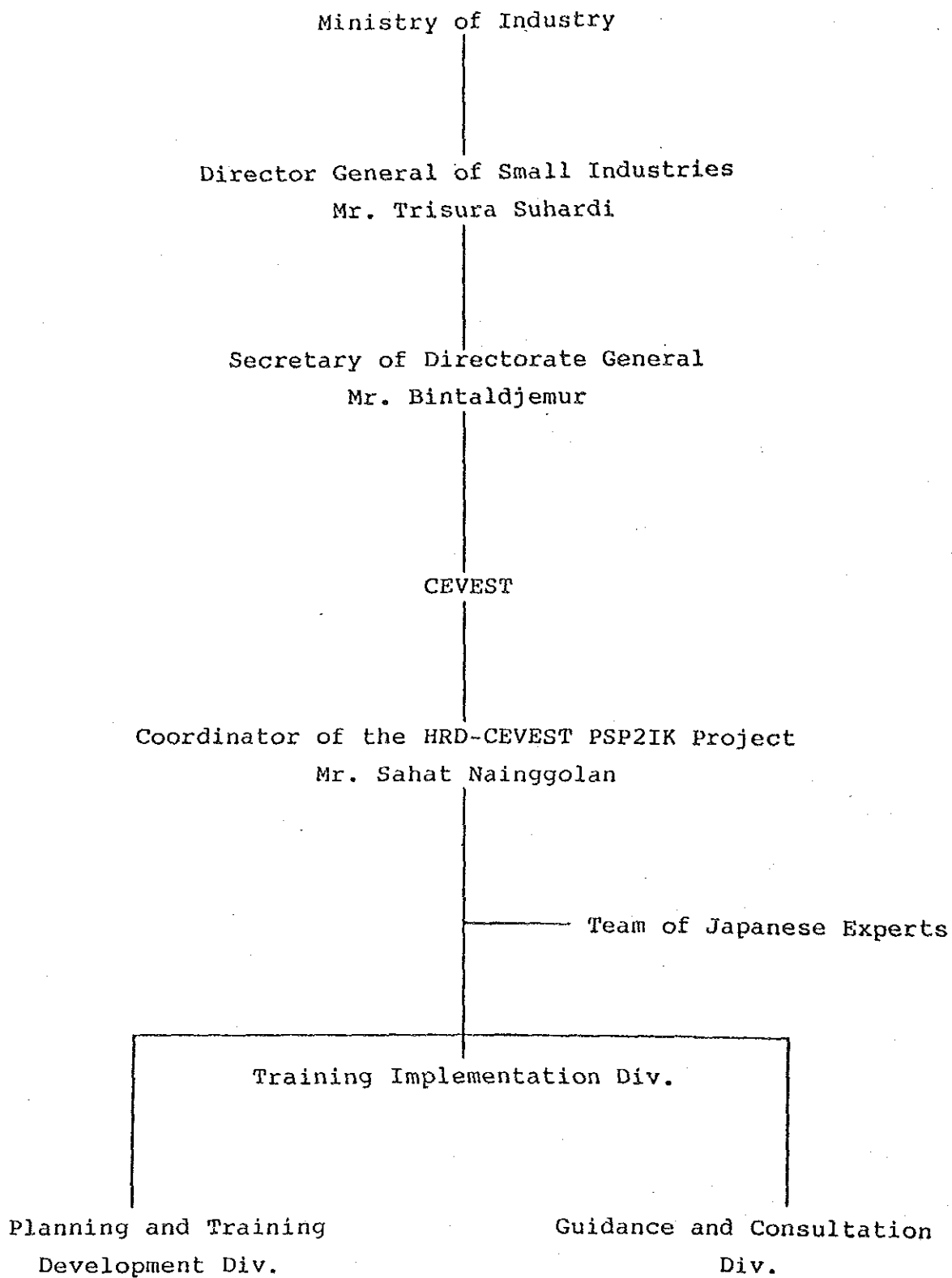
II.

SUB-COUNTERPART

1. Rosman Barlian
2. Tolix Marpaung
3. Unsuruddin
4. Moch. Ilyas Rapi
5. Kusuma Novarida
6. Andi Padlan
7. Ansari
8. Mayerpin
9. Mangin
10. Widodo
11. Erni

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THE ORGANIZATION OF CEVEST



(AENX 3) PROVISION OF EQUIPMENT

(Thousand Yen)

| 'FY | CIF PRICE (Provided Equipment/ Accompanied Equipment) | Contents (Provided Equipment) | Evaluation of utilization (+) |
|-------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| '83 | 18,749 (14,767 / 3,982) | Duplicating Printer Printing Machine Personal Computer Word Processor AV Materials Landcruiser Mini Bus | B B A A B A A |
| '84 | 1,992 (1,992 / --) | Copying Machine (offset) Electric Typewriter (3) Handy Typewriter AV Materials | A A A B |
| '85 | 4,696 (4,140 / 556) | Video Camera Recorder Book Binding Machine Electric Paper Cutting Machine Plate Making Machine (for offset printing) Electric punch Machine Electric Binder Drill | B B B B B B |
| '86 | 24,741 (24,497 / 244) | Video Tape Recorded (30pieces) Air Conditioner (7 set) Paper Sorter Machine Floppy Disk Cabinet, 8mm Video Tapes (20), Stencial Duplicator (2), Stencial Cutters, Typewriter (4) | D A A A B A A |
| '87 | 23,217 (15,644 / 7,573) | Common Tools Non-ferrous Metal Casting Equipment, Forging Equipment |) A) A) A |
| Total | 73,395 (61,040 / 12,355) | | |

(+) A : utilized effectively c : utilized not effectively
B : utilized D : not utilized

JAPANESE EXPERTS DISPATCHED BY JICA

| PHASE | | IMPLEMENTATION OF THE PROJECT | | | | | | | | | | | | |
|----------------------------------------|---------------------|----------------------------------------|-----|------|-----|------|-----|-----------------|-----|------|------|-----|-----|-------|
| | | I. PREPARATION AND BASIC ESTABLISHMENT | | | | | | II. DEVELOPMENT | | | | | | |
| | | 1983 | | 1984 | | 1985 | | 1986 | | 1987 | | | | |
| FY. YEAR | MONTH | 1/4 | 2/4 | 3/4 | 4/4 | 1/4 | 2/4 | 3/4 | 4/4 | 1/4 | 2/4 | 3/4 | 4/4 | |
| 1. Sub Leader | MIZOGAMI | 8/30 | | | | | | | | | | | | |
| 2. Guidance and Consultation | Hideharu KASAMA | 8/30 | | | | | | | | | | | | |
| 3. Planning and Management of Training | Takenori NAGASHIMA | 8/30 | | | | | | | | | | | | |
| 4. Development of Teaching Materials | Motetsu IJUNI | 8/30 | | | | | | | | | | | | |
| 5. Promotion of Subcontracting | Masuji SAMOTO | 11/1 | | | | | | | | | | | | |
| 6. Sub Leader | Kazuyoshi HARA | | | | | 8/26 | | | | | | | | 8/25 |
| 7. Development of Teaching Materials | Shintichi OOHIRA | | | | | 8/25 | | | | | | | | 8/25 |
| 8. Surveys and Analysing Materials | Kazuyoshi NAKAMURA | | | | | 8/26 | | | | | | | | 8/25 |
| 9. Management of Training and Guidance | Takashi SASAKI | | | | | | | | 2/3 | | | | | |
| 10. Technical Training | Tatsuaki KIRABATA | | | | | | | | | | 2/14 | | | 2/15 |
| 11. Technical Training | Tetsuaki NISHIMURA | | | | | | | | | | 2/14 | | | 2/15 |
| 12. Technical Training | Takashi SASAKI | | | | | | | | | | | | | 9/16 |
| 13. Casting | Takaji NODA | | | | | | | | | | | | | 9/16 |
| 14. Casting | Tetsuo KIMUCHI | | | | | | | | | | | | | 9/25 |
| 15. Advisor for Technical Training | Koji ASAKA | | | | | | | | | | | | | 10/19 |
| 16. Forging | Shigeoyoshi IWASAKI | | | | | | | | | | | | | 11/10 |

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JAPANESE SURVEY TEAM DISPATCHED BY JICA

| IMPLEMENTATION OF THE PROJECT | | | | | | | | | | | | |
|------------------------------------|----------------------------------------|-----|------|-----|------|-----|-----------------|-----|------|-----|------|-----|
| PHASE | I. PREPARATION AND BASIC ESTABLISHMENT | | | | | | II. DEVELOPMENT | | | | | |
| | FY. YEAR | | 1983 | | 1984 | | 1985 | | 1986 | | 1987 | |
| ITEM | 1/4 | 2/4 | 3/4 | 4/4 | 1/4 | 2/4 | 3/4 | 4/4 | 1/4 | 2/4 | 3/4 | 4/4 |
| Preparatory Survey Team | (8/18 ~ 8/22, 1981) | | | | | | | | | | | |
| The Second Preparatory Survey Team | (11/30 ~ 12/13, 1981) | | | | | | | | | | | |
| Preliminary Survey Team | (10/ 5 ~ 10/19, 1982) | | | | | | | | | | | |
| Detailed Survey Team | (12/ 2 ~ 12/24, 1982) | | | | | | | | | | | |
| Implementation Survey Team | (2/ 8 ~ 2/17, 1983) | | | | | | | | | | | |
| Technical Guidance Team | 12/14 — 12/23 | | | | | | | | | | | |
| '' | 3/11 — 3/19 | | | | | | | | | | | |
| '' | 8/17 — 8/24 | | | | | | | | | | | |
| '' | 3/16 — 3/24 | | | | | | | | | | | |
| '' | 6/10 — 7/3 | | | | | | | | | | | |
| Evaluation Team | 11/10 — 11/18 | | | | | | | | | | | |

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NAME OF HIGH RANKING OFFICERS AND COUNTERPARTS
ATTENDING STUDY TOURS AND TRAINING IN JAPAN IN
THE FRAMEWORK OF EST-CEVEST PROJECT

| No. | Name | Study Activity | Duration | Period | Field of Duty |
|-----|----------------------|---------------------------------------------------|-------------------|---------|--------------------------------|
| 1. | Drs. Joko Mulyanto | Administration | 1/11 - 1/22 | 1982/83 | Programme |
| 2. | S. Syarief M.A. | - do - | - do - | 1982/83 | Textile & Leather |
| 3. | Machdi Ichsani Bsc | - do - | - do - | 1982/83 | - do - |
| 4. | Mangin | General Administration and management of Training | '83/ 3/24 - 5/3 | 1982/83 | Chemical and Building Material |
| 5. | Ir. Ansari | - do - | - do - | 1982/83 | Programme |
| 6. | Christian Rogahang | - do - | - do - | 1982/83 | Chemical & Building Material |
| 7. | Mulyadi S. | Administration | 2/11 - 2/29 | 1983/84 | CEVEST |
| 8. | Ayun Runlan D.A. | Planning and Management of Training | '84/ 3/17 - 9/16 | 1983/84 | Food |
| 9. | Simon Dua Padang | - do - | - do - | 1983/84 | Chemical & Building Material |
| 10. | Widodo Bk. Teks | Survey and Analysis | - do - | 1983/84 | Textile & Leather |
| 11. | Ir. Ilyas Rapi | Guidance and Consultation | 12/13 - '85/ 7/ 2 | 1984/85 | Metal |
| 12. | Rosman Barlian Msc. | - do - | - do - | 1984/85 | Programme |
| 13. | Unsuruddin Msc. | - do - | - do - | 1984/85 | Chemical & Building Material |
| 14. | Drs. Zulkifli Rasyid | Management of Training and Curriculum Design | - do - | 1984/85 | Food |
| 15. | Tolix Marpaung | - do - | - do - | 1984/85 | Textile & Leather |
| 16. | Ir. Lengkong | Administration | 3/23 - '86/ 4/ 6 | 1985/86 | Metal |
| 17. | Drs. S. Mailoa | - do - | - do - | 1985/86 | Chemical & Building Material |
| 18. | Mayerfin B.A. | Audio Visual | 1/30 - '86/ 8/12 | 1985/86 | Secretary of DCSI |
| 19. | Andi Padian Msc. | Guidance and Consultation | 3/24 - '86/ 6/ 3 | 1985/86 | Programme |
| 20. | Kusuma Novarida BA | - do - | - do - | 1985/86 | Secretary of DCSI |
| 21. | Suratman B.Sc. | Low Cost Automation | 3/24 - '86/ 5/11 | 1985/86 | Metal |
| 22. | Rusdi Dimar | Promotion Small Industry | 2/24 - '87/ 6/ 9 | 1986/87 | Metal |
| 23. | Elim | - do - | - do - | 1986/87 | Handicraft |
| 24. | Hendry Waluyan | Personal Computer | 6/12 - 8/18 | 1986/87 | Chemical & Building Material |

ANNEX 7-1 INPUT ON NATIONAL BUDGET BY THE GOVERNMENT OF INDONESIA TO CEVEST-EST
(Unit: One thousand Rupiah)

| Category / Fiscal Year | 1983/84 | 1984/85 | 1985/86 | 1986/87 | 1987/88 |
|--------------------------------------|---------|---------|---------|---------|---------|
| Personnel Cost | 74,591 | 63,287 | 30,540 | 34,776 | 29,430 |
| Construction Cost | 240,625 | 48,800 | 108,762 | 109,800 | 0 |
| Operation Cost | 0 | 0 | 0 | 36,812 | 27,800 |
| Cost of implementing the Project | | | | | |
| 1. Cost of developing curriculum | 0 | 21,000 | 6,275 | 2,000 | 0 |
| 2. Travelling expenses of Survey | 21,066 | 33,622 | 33,175 | 11,796 | 8,500 |
| 3. Others | 0 | 0 | 1,200 | 1,000 | 0 |
| Cost of implementing training course | 0 | 0 | 36,944 | 57,500 | 47,000 |
| T O T A L | 336,282 | 166,709 | 239,656 | 254,674 | 112,730 |

ANNEX 7-2 INPUT ON NATIONAL BUDGET BY THE GOVERNMENT OF JAPAN TO CEVEST-EST
(Unit: One thousand Yen)

| Category / Fiscal Year | 1983/84 | 1984/85 | 1985/86 | 1986/87 | 1987/88 |
|----------------------------------|----------|---------|---------|---------|---------|
| Cost of despatch of Experts | 77,772 | 54,993 | 75,576 | 56,143 | |
| Cost of provision of Equipment | 18,749 | 1,957 | 4,696 | 24,741 | 23,217 |
| Cost of despatch of Survey Teams | 2,872 | 2,512 | 0 | 19,077 | 6,494 |
| (Cost before FY 1983) | (18,074) | | | | |
| Cost of implementing Surveys | 0 | 0 | 2,024 | 3,334 | 6,661 |
| T O T A L | 99,393 | 59,462 | 82,296 | 103,295 | 36,372 |

Foot Note : Cost of acceptance of Indonesian counterpart personnel for their training in Japan is not included.

REPORTSReports of Business Trip, Evaluation of Training

- | | | |
|------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|
| 1. The report of field trip to Semarang | (Dec. 1985) | K. Hara |
| 2. The report of business tour to Bandung and Garut | (Dec. 1985) | S. Ohira |
| 3. The report of the survey trip to Yogyakarta | (Dec. 1985) | K. Nakamura |
| 4. The report on business trip to Surabaya | (Feb. 1986) | K. Hara |
| 5. The report of survey trip to Yogyakarta | (Mar. 1986) | S. Ohira |
| 6. The report of survey trip to Semarang | (Mar. 1986) | K. Nakamura |
| 7. The report of business trip to Jambi | (Dec. 1986) | S. Ohira |
| 8. The evaluation of the UPT Manager Training Course in 1985 and some suggestions for the improvement of the training Course | (Sept. 1986) | K. Nakamura |
| 9. The evaluation of the TPLS Marketing Course in 1985 | | K. Hara |

Public Information on EST-CEVEST

K. Hara

1. Panel making for introduction to training
2. Making up of Pamphlets on EST-CEVEST

Annual Report

- | | | |
|---------------------------------|-----------------|--------|
| 1. A/R on CEVEST-EST activities | (Fiscal 83/84), | PSP2IK |
| 2. -do- | (Fiscal 84/85), | PSP2IK |
| 3. -do- | (Fiscal 85/86), | PSP2IK |

RECOMMENDATIONSProposal for the development of EST-CEVEST 1986

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 1. Status and Organization (making up of basical data upon the functions study regarding CEVEST-EST throughout the inquiries examination). | K. Hara |
| 2. Training (CEVEST-EST's future desirable training system) | S. Ohira |
| 3. Guidance consultation system | K. Nakamura |
| 4. Study Report on technical training for the development of the CEVEST-EST | Study Team (T. Sasaki) |

TEXTBOOKS

Training Manuals

- (1) Preparation of Manuals for Training Program and Implementation
- (2) Preparation of name list of TPL/S
- (3) Workshop Manual - Casting
- (4) Non-ferrous metal casting

Teaching Materials

- Sub-teaching materials :
- 1) Production Management I & II
 - 2) Marketing Management

- Video teaching aids :
- 1) Introduction of small-scale industries in Indonesia
 - 2) Achievement Motivation Training (A.M.T.)

2

ANNEX 10. Project Accomplishment

| I T E M | STATE | REMARKS |
|--------------------------------------------------------------------------------------------|------------------|------------------------------------------|
| A. Training Course | Almost Completed | |
| (a) TPLS Training | Not Started | |
| (b) Trainer Training | Almost Completed | |
| (c) Entrepreneur Training | Almost Completed | |
| (d) Official/Staff Training | In Progress | Non-ferrous metal Casting course (87/11) |
| (e) Technical Training | | Forging (88/ 1) |
| B. Surveys | Almost Completed | |
| (a) Pre and Post training surveys | Almost Completed | |
| (b) Surveys related to Guidance, Consultation and Advisory Service Activity | | |
| C. Guidance, Consultation and Advisory Service Activity | Almost Completed | |
| (a) Seminars and Symposium | Almost Completed | |
| (b) Updating and publication of necessary instruction manuals | Almost Completed | |
| (c) Consulting and advising small industry officials as well as extension service training | Almost Completed | |

WS

Annex 11.

Training Courses

| | <u>Period</u> | <u>Number of Participants</u> | <u>Budget</u> |
|-----------------------------|--------------------------------|-----------------------------------|----------------------------------|
| a. TPLS Training | 1. Feb. 28 - Mar. 27, 1986 | 22 | PSP2IK (CEVEST) |
| | 2. Dec. 3 - Dec. 23, 1986 | 20 | PSP2IK (CEVEST) |
| | 3. Aug. 27 - Sep. 18, 1987 | 20 | PSP2IK (CEVEST) |
| b. UPT Managers training | 1. Jan. 30 - Mar. 26, 1986 | 25 | PSP2IK, PUSBINLAT (CEVEST) |
| | 2. Oct. 8 - Dec. 2, 1986 | 18 | PSP2IK (CEVEST) |
| c. Entrepreneur Training | 1. Aug. 27 - Sept. 10, 1985 | 22 | PSP2IK (CEVEST) |
| | 2. Oct. 7 - Oct. 19, 1985 | 20 | BIPIK |
| | 3. Feb. 20 - Feb. 22, 1986 | 25 | BIPIK |
| | 4. Aug. 19 - Aug. 30, 1986 | 21 | PSP2IK (CEVEST) |
| | 5. Nov. 2 - | 14 | TEXTILE & LEATHER PROJECT |
| | 6. Oct. 13 - Nov. 1, 1986 | 20 | DGMI |
| | 7. Oct. 16 - Nov. 14, 1987 | 20 | CHEMISTRY PROJECT |

| | | | |
|----------------|---------------|----|---------------|
| d. Official | 1. Nov. 2 - | 20 | BIPIK |
| Staff Training | Nov. 14, 1985 | | |
| | 2. Jan. 20 - | 24 | " |
| | Feb. 1, 1986 | | |
| | 3. Jan. 27 - | 30 | " |
| | Feb. 8, 1986 | | |
| | 4. Feb. 24 - | 20 | " |
| | Mar. 6, 1986 | | |
| | 5. Jul. 31 - | 30 | " |
| | Aug. 13, 1986 | | |
| | 6. Dec. 8 - | 30 | " |
| | Dec. 20, 1986 | | |
| | 7. Sep. 9 - | 32 | " |
| | Sep. 16, 1986 | | |
| | 8. Aug. 25 - | 52 | " |
| | Sep. 9, 1986 | | |
| | 9. Nov. 16 - | 20 | CEVEST, BIPIK |
| | Dec. 12, 1987 | | |
| | 10. Jan. 11 - | 20 | " |
| | Feb. 6, 1988 | | |

(Technical Training course)

No. 9: Non-ferrous metal crucible casting course

No.10: Smithery and simple machine forging course

I-② Minutes of Discussion

THE MINUTES OF THE DISCUSSIONS BETWEEN THE JAPANESE EVALUATION TEAM AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF THE REPUBLIC OF INDONESIA ON THE JAPANESE TECHNICAL COOPERATION PROJECT FOR THE CENTER FOR VOCATIONAL AND EXTENSION SERVICE TRAINING

The Japanese Evaluation Team (hereinafter referred to as "The Team"), organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") headed by Mr. Eiryo Sumida visited the Republic of Indonesia from November 10 to 18, 1987, exchanged views and had a series of discussions with the Indonesian authorities concerned for the purpose of evaluating the achievements of Japanese technical cooperation project for the Extension Service Training Department of the Center for Vocational and Extension Service Training (hereinafter referred to as "the Project").

As a result of the joint evaluation work and discussions, both sides reached the following conclusions :

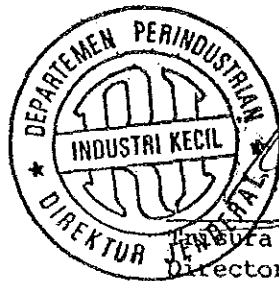
- (1) Most activities programmed in the Record of Discussions and other pertinent papers are reaching their final stage. In spite of some unexpected difficulties, the functional training courses except trainer training course have been smoothly conducted by both sides.
- (2) The cooperation in the field of functional training, surveys and guidance activities will be finished in February 1988. The Indonesian side will effectively implement the above activities again by utilizing the facilities and equipment of CEVEST-EST.
- (3) Since commencement of functional training in Aug. 1985, the trainer training course has not been implemented. In the event that DGSI conducts trainer training course, the Government of Japan, through JICA, is ready to cooperate in the implementation of the course.
- (4) As to the technical training courses on non-ferrous casting and ferrous forging, the technology transfer has not been completed yet.
- (5) In accordance with the above observations, it is considered that some technical cooperation subjects in the field of non-ferrous casting and ferrous forging should be followed up for about one (1) year in order to attain their purposes.
- (6) Technical cooperation subjects in the field of rattan furniture, ready-made garments and food packaging are not taken up as the objective trade.
- (7) In the event that DGSI conducts regional training program, the Government of Japan, through JICA, is ready to cooperate in the implementation process.

In view of the above, both sides agreed to recommend to their respective Governments that it is still necessary to follow up the cooperation in the field of the technical training (Non-ferrous casting and ferrous forging) for another 12-month period from February 16, 1988 to February 15, 1989 by implementing the cooperation mentioned in Annex I.

Jakarta, November 15, 1987

隅田栄亮

Eiryo Sumida
Leader,
Japanese Evaluation Team,
Japan International
Cooperation Agency,
Japan



Jenarfa Suhardi
Director General
For Small Industries,
Ministry of Industry,
The Republic of Indonesia

1. The Tentative Schedule of Implementation and the Technical Cooperation Program of the Project are shown in Annex A and B.
2. In formulating the above-mentioned schedule, it was mutually understood that both sides should exert their utmost effort so as to attain the target stated in the above mentioned schedule within the cooperation period.
3. Measures to be taken by both sides to the above Cooperation will be treated in the same manner prescribed in the articles of Attached Document in the Record of Discussions signed on February 16, 1983.

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ANNEX A : Tentative Schedule of Implementation

| ITEMS / | CALENDAR YEAR | FEB. '88 | APR. '88 | AUG. '88 | FEB. '89 |
|--------------------------------------------------------------|---------------|----------|----------|--------------|---------------|
| 1. Despatch of Japanese Experts | | | | | |
| 1) Short-Term Experts | | | | | |
| . Casting (2) | | | | ← 3-month → | |
| . Forging (2) | | | | | ← 3-month → |
| . Planning and Coordination for technical training (1) | | | | ← 6-month → | |
| 2) Long-Term Expert(s) | | | | ← 12-month → | |
| 2. Training of Indonesian Counterpart Personnel in Japan (4) | | | | | ← 2-3 month → |

ANNEX B : Technical Cooperation Program of the Project

| ITEMS / | CALENDAR YEAR | FEB. '88 | APR. '88 | AUG. '88 | FEB. '89 |
|------------------------------|---------------|----------|----------|---------------|-------------|
| 1. Technical Training Course | | | | | |
| 1) Non-ferrous Casting | | | | ← 1.5-month → | |
| 2) Ferrous Forging | | | | | ← 1-month → |
| 2. Trainer Training Course | | | | ←-----→ | |
| 3. Regional Training Program | | | | ←-----→ | |

Footnote: The implementation of technical training course and Regional Training Program is subject to further study by both Indonesian and Japanese sides.

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I.-③ Minutes of Discussion

MINUTES OF DISCUSSION
BETWEEN
THE INDONESIAN COUNTERPART TEAM
OF THE MINISTRY OF INDUSTRY
AND
THE JAPANESE ADVISORY SURVEY TEAM
ON
THE INDONESIA-JAPAN TECHNICAL COOPERATION FOR
THE CENTER FOR VOCATIONAL AND EXTENSION SERVICE TRAINING (CEVEST)

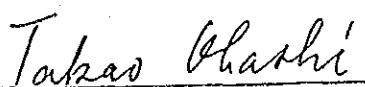
The Japanese Advisory Survey Team (hereinafter referred to as "The Japanese Team") organized by the Japan International Cooperation Agency, executing agency for the Technical Cooperation of the Government of Japan (hereinafter referred to as "JICA"), headed by Mr. Takao Ohashi, Director, International Affairs Office, Small & Medium Enterprises Agency, Ministry of International Trade and Industry, visited the Republic of Indonesia from August 17 to August 23, 1986, for the purpose of consulting with Ministry of Industry on the smooth and successful implementation of the Center for Vocational and Extension Service Training (CEVEST).

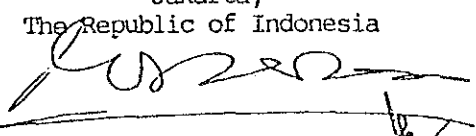
During their stay in the Republic of Indonesia, the Japanese Team exchanged view and had a series of discussions with the Indonesian Counterpart Team of Ministry of Industry with respect to the Indonesia-Japan Technical Cooperation of this Project.

As a result of the discussions, both sides came to the understanding concerning the matters referred to in Annex 1.

The list of participants from both sides at the meeting is attached in Annex 2.

August 22, 1986
Jakarta,
The Republic of Indonesia


TAKAO OHASHI
Leader,
Japanese Advisory Survey Team,
Japan International Cooperation
Agency, Japan.


TRISURA SUHARDI
Director General of Small
Industry
Ministry of Industry,
The Republic of Indonesia.

Annex 1.

1. Framework of the activities of Extension Service Training Department of CEVEST.

With reference to the Framework of the activities of Extension Service Training Department of CEVEST, which is in the para.3 of the Master Plan of the Record of Discussions for CEVEST, both Japanese and Indonesian sides agreed to implement the activities as described in the following.

(1) Training Course

- a. TPLS Training
- b. Trainers Training
- c. Entrepreneur Training
- d. Official/Staff Training

(2) Surveys

- a. Pre and Post training surveys
- b. Surveys related to Guidance, Consultation and Advisory Service Activity

(3) Guidance, Consultation and Advisory Service Activity

- a. Seminars and Symposium
- b. Updating and publication of necessary instruction manuals
- c. Consulting and advising small industry officials as well as extension service workers

2. Technical Training

- (1) The Indonesian side agreed to the conditions proposed by the Japanese side, which the technical training courses to be held at CEVEST should satisfy. The conditions are as follows:

- (A) The courses should be conducted within the limitation of the budget available for CEVEST project.
 - (B) It is possible to recruit the Japanese expert in that technical field.
 - (C) The courses should be conducted without changing the present facilities of CEVEST.
 - (D) The demarcation of the training courses should be clear between those which has been conducted at Vocational Training Dept. of CEVEST and those which would be conducted at Extension Service Training Dept. of CEVEST.
- (2) As to the dispatch of short term technical experts requested by the Indonesian side, both sides agreed to follow the under-mentioned steps.

Both Japanese experts and Indonesian counterpart personnel will make a survey on the current situation of the technical training in Indonesia.

Based on the result of the survey, both sides will study the necessity of dispatching the short term experts in some specific fields. When the necessity is affirmed, the Japanese side will study the possibility of dispatching the short term experts in accordance with the Note described in the Annex II of the Record of Discussions of this project.

THE RECORD OF DISCUSSIONS BETWEEN
THE JAPANESE IMPLEMENTATION SURVEY TEAM
AND THE AUTHORITIES CONCERNED OF
THE GOVERNMENT OF THE REPUBLIC OF INDONESIA
ON THE JAPANESE TECHNICAL COOPERATION
FOR THE CENTER FOR VOCATIONAL AND
EXTENSION SERVICE TRAINING
(CEVEST)

The Japanese Implementation Survey Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Shigeru Eda, Director-General, Statistics and Information Department, Ministry of Labour, visited the Republic of Indonesia from February 8 to February 17, 1983 for the purpose of working out the details of the technical cooperation programme concerning the project on the Center for Vocational and Extension Service Training (hereinafter referred to as "the Project"), the ASEAN Human Resources Development Project in the Republic of Indonesia.

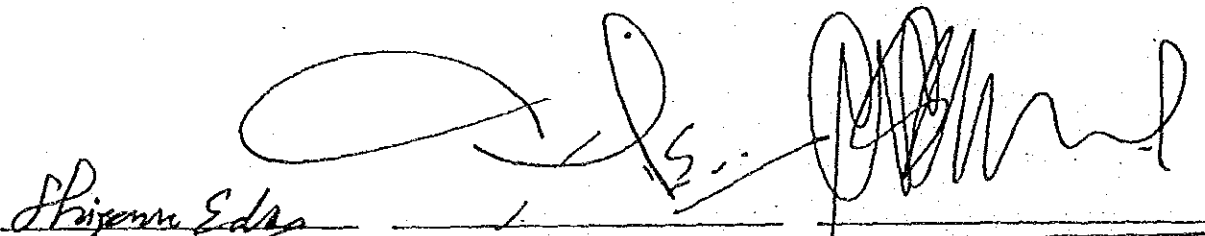
During its stay in the Republic of Indonesia, the Team exchanged views and had a series of discussions with the Indonesian authorities concerned in respect of the desirable measures to be taken by both Governments for the successful implementation of the Project.

As a result of the discussions, the Team and the Indonesian authorities concerned agreed, with reference to the Minutes of the Second ASEAN-Japan Meeting on the ASEAN Human Resources

Development

Development Project, Jakarta, 6-7 October 1981, to recommend to their respective Governments the matters referred to in the document attached hereto.

February 16, 1983
Jakarta



| | | |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| SHIGERU EDA Leader Implementation Survey Team, Japan International Cooperation Agency, Japan | DANANG D. JOEDONAGORO Director General of Manpower Development and Utilization, Ministry of Manpower and Transmigration, The Republic of Indonesia | GITOSEWOJO Director General of Small Industry, Ministry of Industry, The Republic of Indonesia |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|

THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN BOTH GOVERNMENTS

1. The Government of Japan and the Government of the Republic of Indonesia will cooperate with each other in implementing the Project on the Center for Vocational and Extension Service Training (hereinafter referred to as "CEVEST") for the purpose of developing human resources necessary for the expansion and improvement of the vocational training system and small industries extension service system. Furthermore, as a part of the ASEAN Human Resources Development Project, it is anticipated that the Project will strengthen and accelerate the cooperation among ASEAN countries through the dissemination of training methods for vocational training and small industries extension service in the region.
2. The Project will be implemented in accordance with the Master Plan which is attached as Annex I.

II. DISPATCH OF JAPANESE EXPERTS

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to provide at its own expense services of the Japanese experts as listed in Annex II through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2.



2. Privileges, exemptions and benefits to be granted by the Government of the Republic of Indonesia to the Japanese experts referred to inl. above and their families in the Republic of Indonesia will be no less favourable than those granted to experts and their families of third countries or of international organizations performing similar missions, and will include the followings:

- (1) Exemption from income tax and charges of any kind imposed on or in connection with the living allowances remitted from abroad in relation with the implementation of the Project;
- (2) Exemption from import and export duties and any other charges imposed in respect of personal and household effects which may be brought into from abroad or taken out of the Republic of Indonesia;
- (3) Exemption from import tax, import sales tax, sales tax, and other taxes and charges of any kind imposed on or in connection with the purchase in the Republic of Indonesia by the Japanese experts of one motor vehicle per each expert;
- (4) Free local medical services and facilities to the Japanese experts and their families.

III.

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[Handwritten signature]

III. PROVISIONS OF MACHINERY AND EQUIPMENT

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures to provide at its own expense such machinery, equipment and other materials (hereinafter referred to as "the Equipment") necessary for the implementation of the Project as listed in Annex III.

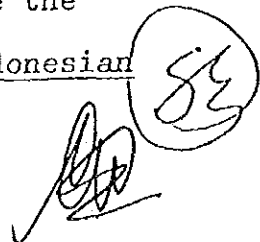
The major portion of the Equipment will be provided under the grant aid scheme of the Government of Japan and, as supplement, a small portion of the Equipment will be provided through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The Equipment to be provided under the Colombo Plan Technical Cooperation Scheme will become the property of the Government of the Republic of Indonesia upon being delivered c.i.f. to the Indonesian authorities concerned at the ports and/or airports of disembarkation, and will be utilized exclusively for the implementation of the Project in consultation with the Japanese experts referred to in Annex II.

IV. TRAINING OF INDONESIAN PERSONNEL IN JAPAN

1. In accordance with the laws and regulations in force in Japan, the Government of Japan will take necessary measures through JICA to receive at its own expense the

Indonesian

A handwritten signature is written below the word "Indonesian". To the right of the signature, the initials "SE" are circled in a hand-drawn circle.

Indonesian personnel connected with the Project for technical training in Japan through the normal procedures under the Colombo Plan Technical Cooperation Scheme.

2. The Government of the Republic of Indonesia will take necessary measures to ensure that the knowledge and experience acquired by the Indonesian personnel from technical training in Japan will be utilized effectively for the implementation of the Project.

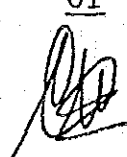

V. SERVICES OF THE INDONESIAN COUNTERPART PERSONNEL AND ADMINISTRATIVE PERSONNEL

1. In accordance with the laws and regulations in force in the Republic of Indonesia, the Government of the Republic of Indonesia will take necessary measures to secure at its own expense the necessary services of Indonesian counterpart personnel and administrative personnel as listed in Annex IV.

2. The Government of the Republic of Indonesia will allocate the necessary number of suitably qualified personnel corresponding to each Japanese expert to be dispatched by the Government of Japan as specified in Annex II for the effective and successful transfer of technology under the Project.

VI. MEASURES TO BE TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF INDONESIA

1. In accordance with the laws and regulations in force in the Republic of Indonesia, the Government of the Republic

of
 

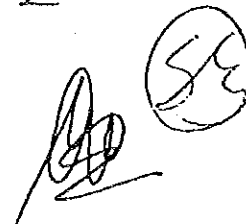
of Indonesia will take necessary measures to provide at its own expense:

- (1) Land, buildings and facilities as listed in Annex V;
- (2) Supply or replacement of machinery, equipment, instrument, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project other than those provided by the Government of Japan under III. above;
- (3) Transportation facilities and travel allowance for the Japanese experts for the official travel within the Republic of Indonesia;
- (4) Suitably furnished accommodations for the Japanese experts and their families.

2. As for the Equipment to be supplied under the Colombo Plan Technical Cooperation Scheme, the Government of the Republic of Indonesia will take, in accordance with the laws and regulations in force in the Republic of Indonesia, necessary measures to meet:

- (1) Expenses necessary for the transportation within the Republic of Indonesia as well as for the installation, operation and maintenance thereof;
- (2) Customs duties, internal taxes and any other charges imposed in the Republic of Indonesia.

3.



3. In accordance with the laws and regulations in force in the Republic of Indonesia, the Government of the Republic of Indonesia will take necessary measures to meet all operating expenses necessary for the implementation of the Project.

VII. ADMINISTRATION OF THE PROJECT

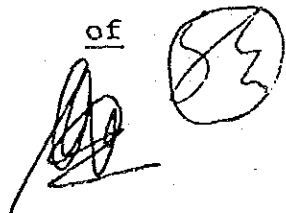
1. The Ministry of Manpower and Transmigration, represented by the Director General of Manpower Development and Utilization, and the Ministry of Industry, represented by the Director General of Small Industry, will bear overall responsibility for the implementation of the Project.

2. For the smooth and effective implementation of the Project, the Joint Committee with the function and composition as referred to in Annex VI will be established.

3. The Project Coordinator of CEVEST, as the Head of the Project, will be responsible for the administrative and managerial matters of the Project. The Project Officer, as the Head of Department, will deal with training programmes and technical matters of respective Department.

4. The Japanese Chief Advisor will provide necessary recommendation and advise on technical and administrative matters concerning the implementation of the Project to the Project Coordinator of CEVEST in close consultation with the representative of Japanese experts of each Department. The representative

of



of Japanese experts of each Department will coordinate the Japanese experts assigned to respective Department and advise the Project Officer concerning training programmes and technical matters of respective Department.

5. The organizational chart of CEVEST Project is as referred to in Annex VII.

VIII. INTERNATIONAL CHARACTERISTICS OF CEVEST AS A PART OF THE ASEAN HUMAN RESOURCES DEVELOPMENT PROJECT

1. While the content of the programme is to be decided jointly by JICA and CEVEST, with due consideration to the development of adequate capacity for its purpose, CEVEST is to be opened to nationals of all ASEAN member countries through regional training programmes to be formulated in the future.

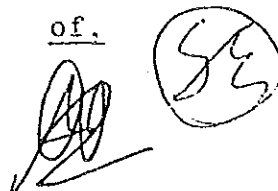
The Government of Japan, through JICA, is ready to cooperate in the implementation of such regional programmes.

2. Due consideration will be paid to appropriate linkage at the programme level between CEVEST and the International Center (tentatively named) in Okinawa, which is to perform the function of liaison and back-up services to National Centers.

IX. CLAIMS AGAINST JAPANESE EXPERTS

The Government of the Republic of Indonesia undertakes to bear claims, if any arises, against the Japanese experts engaged in the Project resulting from, occurring in the course

of.



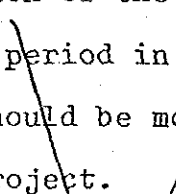
of, or otherwise connected with the discharge of their official functions in the Republic of Indonesia except for those arising from the wilful misconduct or gross negligence of the Japanese experts.

X. MUTUAL CONSULTATION

There will be mutual consultation between the two Governments on any major issues arising from, or in connection with this Attached Document.

XI. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be five (5) years from the date of the signing of this Record of Discussions. However, there will be a general review by the Joint Committee on the progress of the implementation of the Project during the second year of the cooperation period in order to assess whether the term of cooperation should be modified for the successful implementation of the Project.



ANNEX I Master Plan

1. Objectives of the Project

- (1) CEVEST, to be established under the ASEAN Human Resources Development Project, will be the national institution for the training of vocational training instructors and extension service workers destined to teach at training institutions and small and middle enterprises throughout the country.
- (2) CEVEST, as the ASEAN Human Resources Development Project in Indonesia, is hoped to strengthen and accelerate cooperation among ASEAN countries through the diffusion of innovative and appropriate technology for vocational and extension service training in the region.
- (3) CEVEST shall be composed of two Departments:
 - (i) Vocational Training Department
 - (ii) Extension Service Training Department

2. Objectives of the Technical Cooperation Programme

The objectives of the Japanese technical cooperation programme during the term of cooperation are:

(1)



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(1) Vocational Training Department

(i) To provide and conduct training courses for fostering qualified assistant instructors for public vocational training facilities.

(Instructor Training Type I and Type II)

(ii) To provide and conduct training courses for upgrading/retraining incumbent instructors of public vocational training facilities according to their levels of expertise. (Upgrading/Retraining)

(iii) To provide and conduct training courses for training potential and incumbent directors of vocational training facilities. (Director Training)


(iv) To provide and conduct training courses for training vocational instructors, training officers, and training managers of enterprises including private vocational training institutions. (Training for Instructors of Enterprises)

(v) To conduct research and development essential for establishing an effective national vocational training system and policies.

(2) Extension Service Training Department

(i) To provide and conduct training courses for extension service workers, entrepreneurs and government officials.

(ii)



- (ii) To enhance surveys on small industries development activity in selected areas.
- (iii) To enhance guidance, consultation and advisory service activities for small industries.

3. Framework of the activities of CEVEST

The framework of the activities of CEVEST to be covered by the technical cooperation of the Government of Japan is as shown in the following tables.

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(1) VOCATIONAL TRAINING DEPARTMENT

(i) Training courses

| FIELD | COURSE | INSTRUCTOR TRAINING | | UPGRADING / RETRAINING | | | DIRECTOR TRAINING | TRAINING FOR INSTRUCTORS OF ENTERPRISES |
|---------------|--------------------------|------------------------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------------|---------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------|
| | | TYPE I | TYPE II | ASSISTANT INSTRUCTOR ↓ JUNIOR INSTRUCTOR | JUNIOR INSTRUCTOR ↓ INSTRUCTOR | INSTRUCTOR ↓ SENIOR INSTRUCTOR | | |
| Machining | Machining | 20 | | 15 | 11 | 8 | | |
| | Welding | 20 | | 15 | 11 | 8 | | |
| | Sheet Metal | 10 | | 7 | 5 | 4 | | |
| Auto-motive | Automobile Repairing | 45 | | 33 | 24 | 18 | | |
| | Electricity | 20 | | 15 | 11 | 8 | | |
| Electric Work | Electronics | 30 | | 22 | 16 | 12 | | |
| | Total | 145 | 230 | 107 | 78 | 58 | 120 | 400 |
| Remarks | Duration | 2 years | 4 months | 3 months | 3 months | 3 months | 2 months | 1-2 weeks or more |
| | Frequency of Recruitment | once a year | 3 times a year | once a year | once a year | once a year | several times a year | about 20 times a year |
| | Entrance Requirements | high school education with at least two years of related experience or academy education | enough skills and knowledge on the trade | Over 5 years of experience as an assistant instructor | Over 5 years of experience as a junior instructor | over 5 years of experience as an instructor | incumbent or potential director of a vocational training facility | instructor, training officer, or manager of a enterprise |
| Others | | Lectures on training methodology and teaching practice only | | | | | | |

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(ii) Research and Development

| Subjects of research and development activities | | | |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| a. Training methods and standardization of training curricula and facilities for vocational training | b. Training materials including audio-visual aids | c. Evaluation and certification of trade skill standards | d. Basic studies with a view to providing necessary information for national policy making on vocational training |

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(2) . EXTENSION SERVICE TRAINING DEPARTMENT

(i) Training Course

| Courses | Enroll-ment | Duration | Annual number of courses | Qualification of trainees | Contents |
|--------------------------------|-------------------------------------------------------------------|-------------|--------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. TPL Generalist | 30 - 35 persons | 2 months | 3 courses | Those who have graduated from high school, Academy and University or with equivalent ability. | (1) Duty of extension service worker (2 days) (2) Basic knowledge of extension service worker (9 days) (3) Accounting business and personnel management of small industries (29 days) (4) Field study (10 days) (5) others |
| 2. TPL Specialist (Functional) | 30 - 35 persons | 3 months | 10 - 12 courses | Those personnel who have about two years experiences as TPL or with equivalent experience and ability. | (1) Methodology of finding the actual situation of the mangement of small industries (20 days) (2) Pinancing of small industries (35 days) (3) Management of quality control and process control (including field study) (20 days) |
| 3. Trainer | 30 - 35 persons | 4 months | 3 - 4 courses | Those personnel who have more than two years experiences as TPLS or with equivalent experience and ability. | (1) Management planning and utilization of related information (42 days) (2) Essential points necessary for the guidance of industries (30 days) (3) Marketing strategy (13 days) (4) Teaching method and field training (15 days) |
| 4. Entrepreneur | 30 persons | 3 - 4 weeks | 20 courses | Entrepreneurs from the priority sub-sectors of small industries | (1) Achievement motivation training (2) Socio-economic situation of industries concerned (sector-wise) (3) Basic and practical knowledge required of entrepreneurs (4) Management of stocking, inventory and sales (5) Marketing (6) Personnel management and leadership |
| 5. Officials | Necessary training courses will be organized as necessity arises. | | | | |

(With respect to the contents of training programme, some minor modification may be made in the course of the preparation and implementation of the project.)

(ii) Surveys

| Subjects of survey on small industries development activities | | | |
|---------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------|----------------------------------------------------|
| a. Statistical survey on small industries | b. Production process development of small industries | c. Marketing system of small industry products | d. Trend of consumption of small industry products |

(iii) Guidance, Consultation and Advisory Service Activity

| Activity | Objective |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a. Diagnosis conducted by extension service workers | To solve the problems with respect to management and production process of clusters and individual small industries. |
| b. Seminars and symposia | To develop entrepreneurship of small industries. |
| c. Updating and publication of necessary instruction manuals | To improve the activity of extension service workers. |
| d. Consultancy and advisory services | To solve the problem of the regional small industry development centers (PPIK) by sending roving teams from CEVEST and to cover problems such as the promotion of subcontracting system of small industries. |

ANNEX II Japanese Experts

1. Chief Advisor
2. Coordinator
3. Experts in the fields of:
 - (1) Vocational Training Department
 - (i) Materials/Curricula/Methods/Programmes
 - (ii) Skill Evaluation/Certification
 - (iii) Machining
 - (iv) Welding
 - (v) Sheet Metal
 - (vi) Pipe Fitting
 - (vii) Automobile Repairing
 - (viii) Electricity
 - (ix) Airconditioning/Refrigeration
 - (x) Electronics
 - (2) Extension Service Training Department
 - (i) Planning and Management of Training
 - (ii) Development of Teaching Materials
 - (iii) Surveys and Analyses
 - (iv) Planning and Management of Guidance and Consultation
 - (v) Promotion of Subcontracting in Small industries

Note: Short-term experts may be dispatched when necessity arises, for the smooth implementation of the Project.

ANNEX III

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ANNEX III List of Equipment

List of main articles to be provided by the Government of Japan will be as follows:

1. Vocational Training Department
 - (1) machining equipment
 - (2) welding equipment
 - (3) sheet metal equipment/pipe fitting equipment
 - (4) automobile repairing equipment
 - (5) electricity equipment
 - (6) electronics equipment
 - (7) equipment for research and development
 - (8) audio-visual equipment
 - (9) others
2. Extension Service Training Department
 - (1) equipment for surveys and development
 - (2) audio-visual equipment
 - (3) equipment for practical training
(including low cost automation machinery set)
 - (4) vehicles
 - (5) others

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ANNEX IV List of Indonesian Counterpart Personnel and
Administrative Personnel

1. Project Coordinator
2. Deputy
3. Project Officers
4. Counterpart Personnel

(1) Vocational Training Department

- (i) Methods/Curricula/Programmes
- (ii) Training Materials
- (iii) Skill Evaluation/Certification
- (iv) Basic Studies
- (v) Machining
- (vi) Welding
- (vii) Sheet Metal
- (viii) Pipe Fitting
- (ix) Automobile Repairing
- (x) Electricity
- (xi) Airconditioning/Refrigeration
- (xii) Electronics
- (xiii) Instructor Training Type II
- (xiv) Director Training
- (xv) Training for Instructors of Enterprises

(2) Extension Service Training Department

- (i) Division Chief and Section Chiefs of Extension Service Training
- (ii) Division Chief and Section Chiefs of Study and Survey Development
- (iii) Division Chief and Section Chiefs of Entrepreneur Managerial Development
- (iv) Division Chief and Section Chiefs of Guidance and Consulting

5. Administrative Personnel

- (i) Administration
- (ii) Accounting
- (iii) Clerical work

6. Other necessary personnel



ANNEX V List of Land, Building and Facilities

1. Land

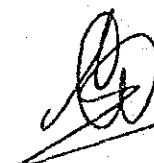
Bekasi, JAWA

2. Building

Buildings necessary for the implementation of the Project other than those provided under the grant aid scheme of the Government of Japan.

3. Facilities

Facilities necessary for the Project, such as supply of electricity, water, etc.



ANNEX VI

ANNEX VI Joint Committee

1. Functions

The Joint Committee will meet at least once a year and whenever necessity arises, and work:

- (1) To formulate the annual operational plan of the Project in line with the Tentative Schedule of Implementation set up under the framework of this Record of Discussions;
- (2) To review the overall progress of the technical cooperation programme set out in this Record of Discussions as well as the achievements of the above-mentioned annual operational plan;
- (3) To review and exchange views on major issues arising from, or in connection with the technical cooperation programme.

2. Composition

(1) Indonesian Side:

- (a) Director General of Manpower Development and Utilization;
- (b) Director General of Small Industry;
- (c) Project Coordinator;
- (d) Representatives of Indonesian authorities concerned.



(2)



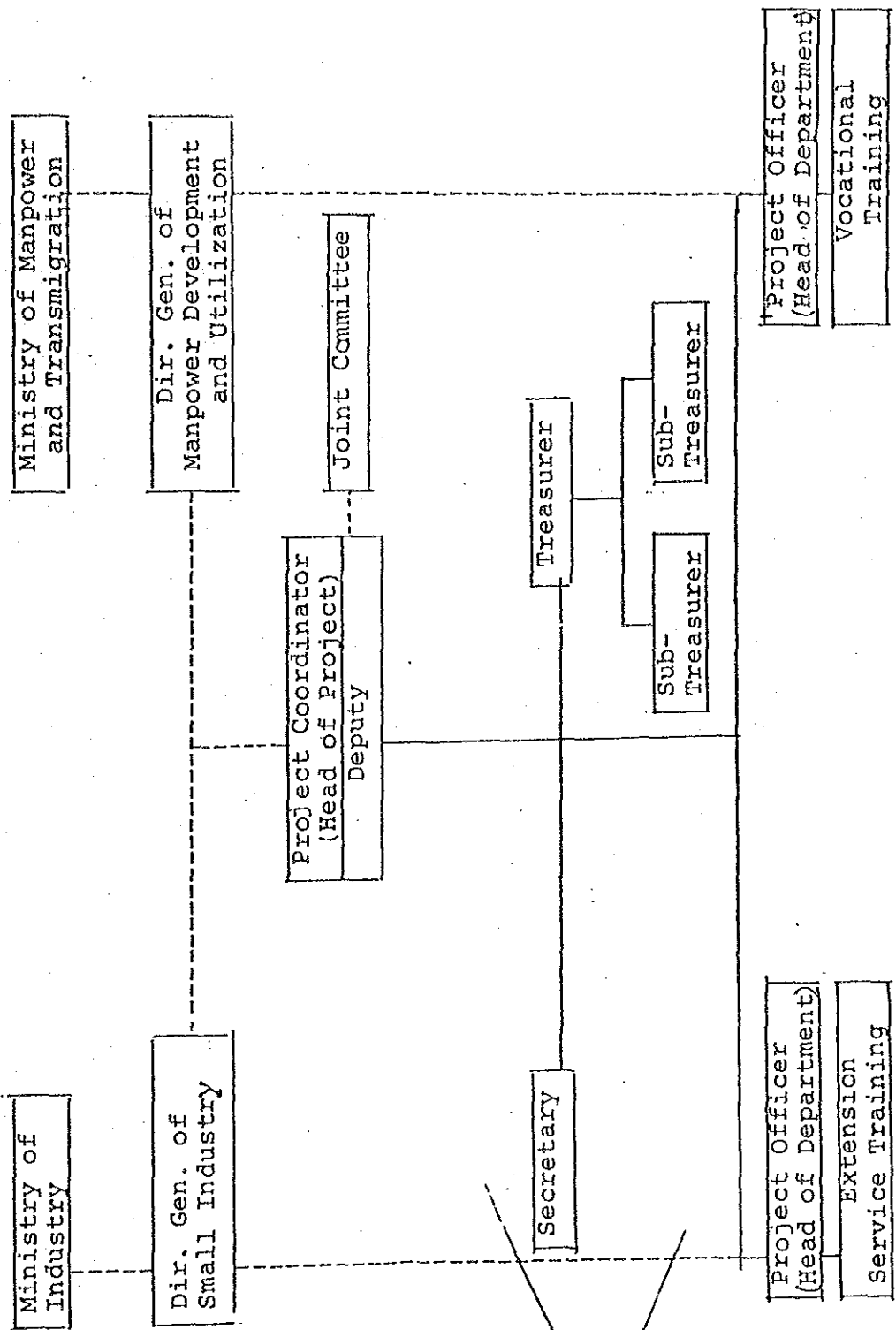
(2) Japanese Side:

- (a) Chief Advisor;
- (b) Representative of each Department;
- (c) Representative of JICA in Indonesia;
- (d) Coordinator;
- (e) Personnel concerned to be dispatched by
JICA if necessary.

Note: Officials of the Embassy of Japan may attend
the Joint Committee as observers.



ANNEX VII THE ORGANIZATION CHART OF CEVEST PROJECT



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[Handwritten Signature]

朝岡 康二(沖縄県立芸術大学教授)

1. インドネシアにおける小規模工業の現状と行政対策

インドネシアにおいて、小規模工業(Small Scale Industry)と規定されているものは、その基本的性格からみて、我国における中小企業と同様のものと考えすることはできない。当然のことながら、両者は歴史的背景において異なり、したがって必然的に存在形態が異なるのである。ごく表層的な印象からみるならば、インドネシアにおける小規模工業は日本の中小企業体とはくらべようもないほど零細であると言え、家内工業に形式分散される範囲にとどまっており、かならずしも通年のフルタイム操業が行なわれているとは限らない。

これらの小規模工業は成立の背景に様々の要因を持っているが、基本的には農村過剰人口の吸収を通して地場産地を形成してきたものと考えられ、その意味では我国における近世末期～明治前半期を通しての地場産業の成熟期に比定しうる。

こうした零細な単位が集合して地場産業を形成している地区をクラスターと称しているが、具体的にインドネシア工業省小規模工業総局が行政対象として「クラスター」と掌握しているのは、直接に公的機関の指導が及んでいる範囲に限られている。したがって、これら「クラスター」の選択には担当程度の行政的配慮が及んでいるものと考えられ、かならずしも全インドネシアの状態を直接に反映したものとは言い難いと思われる。言い換えれば、現在、インドネシア政府がなんらかの政策的意図を持って特定した地区が「クラスター」なのだということになる。

「クラスター」を非鉄鑄造、鍛造部門に限定してみると、ジャワ島はもちろん、アウタージャワの相当に広い範囲に及んでいる。また、これらの「クラスター」とは、直接に関わらない形で、広範囲に鍛造の小規模の集団が各地にみられて、鍛造に関してごく簡単な図式を求めれば、クラスターと小規模集団の二類型に整理することが出来そうである。現在までのところ、後者に関する資料はほとんど入手しがたく、インドネシアにおける農村工業の実体はいまだ明らかではない。しかし、筆者の実見してきたいくつかの例から考えて、インドネシアにおける農具(耕起用具)の供給の相当部分はこの小規模集団に依存しているものと推測される。そして、その技術がインドネシア鍛造技術の基層を形成しているのである(後述)。

これに対して非鉄鑄造はその歴史の長さにもかかわらず十分に普及しているとは言いがたい。「クラスター」としても、ソマラン東部に集中しており、その製品は装飾的なものを主としている。この地域の調査はいまだ行なっておらず、具体的な点は不明だが、一説にはオランダの鑄造砲製造と関わるといわれている。しかし、現在用いられている鑄造砂、

鋳型形式は小型製品に適応したものであって、炉の形式もそうであると推測できる。スマラン東部の鋳造クラスターは装飾的電灯ブラケット等を生産してオーストラリア、ヨーロッパ、アメリカに輸出しているそうであるが、品質の程度はそれほど高くはない。しかし、低賃金に支えられて輸出製品となっているのだと考えられる。

一方、スマトラ東部、メダン周辺にはいくつか鋳鉄工場があり、鉄、非鉄鋳造がおこなわれている。メダンは早くから華僑職人が入って工業を発展させたと考えられるので、この鉄・非鉄鋳造もそれと少なからずの関わりがあると思われる。しかしそればかりではなく、中央政府の殖産政策にのっとった技術指導もかなり入っている模様で、技術的には相当の発展を示している。問題はその発展の敷行性にあると考えられ、かならずしも中央政府の殖産政策が適正であるとはいいがたい点に問題があろう。

2. 鍛造技術の現状と技術的要求

前述のごとく、インドネシア鍛造産地は「クラスター」として掌握されうる地域と、農村地域に散在する小規模集団とに二分されうる。前者としては、西ジャワのスカブミ市近郊のチバト地区、スマトラのブキティンギ近郊、ドバ・パタック、スラウエシのバレバレ近郊のマセベ、あるいはワタンボン（ボネ）、トラジャランドのランテパオ近郊等々があるが、なかでも、チバト地区、マセベ、ボネ地区は産地と呼ぶにふさわしい規模と商品流通を持っている。

チバト地区は、ジャカルタに隣接している地理的条件からいって、インドネシア政府がもっとも力を入れて産地形成を計ろうとしている地域と考えられる。ここでの経営方法についてはまだ十分把握していないが、個人経営と協同組合方式とが行なわれているらしい。そして、後者はそれなりの成功を示しているようで、鍛造工程の分業化がかなりの程度進行している。また、チバトの国道ぞいには五～六軒の産地問屋が店を出しており、（他に協同組合経営の店もある）、伝聞によれば仲買ブローカーがかなり存在するという。この仲買ブローカーはスカブミ市をはさんだ西側の農村部に展開する鍛冶集落にも及んでおり、さらにバンドン寄りチヘアの小集団もその活動範囲に入るらしい。

したがって、チバト地区で製造される製品は、全ジャワに出荷されており、製品の地域的依存度はひくい。その上で、近年、ジャカルタを中心とした都市部の需要に対応した新しい変化が生じているらしく、このことも分業化を促進する上で好都合となって単一製品の多量生産を可能とするから、安定的な分業化が進むからである。

これに対して、スカブミ市の西側のパロン郡を中心とする鍛冶集団は主として農村需要に応じており、前述のように仲買を通してチバトの商圈と接続しているが、それと同時に鍛冶屋の雇員が直接にバサールへ荷を持って行って売る直売りもさかんなようである。直売りはスカブミ市やチアンジュール、バンドン市をはじめ相当に広く西ジャワ各地におよ

んでいる。したがって、この地域はチバト地区に対して、より古い伝承的形式を保存していると考えてよく、それが生産手段、生産組織、生産様式に反映している。

この地域も七・八年以前の状態と比較すると、それなりに変化しているようであるが、それでも、親方とその親族を中心とした家族的経営の形式をとり、農業との間に兼業関係をつくっているという。技術的にみるならば金床の大形化、座位から立位への移行がすすんでいるが、一方で、マレー系鍛冶の特徴的な鞴である筒形鞴が用いられている。筒形鞴は送風能力に限界があるが、このためにかえって炭の消費が低く、小物鍛造には適していると考えることができる。しかし、やゝ大型の製品を作るとなると無理が生じる。このためにチバト地区では近年（多分ここ二～三十年の変化であろう）中国式の箱鞴を利用する方向に変化して、生産手段全体が大きく変わり、かつ、作業形式も新方式になってきたのである。その背景にはこの地方の農耕方法の変化が背景にあつて、在来型のU字形の鉄を木台につける形式の鍛の利用から、中国の鑊（ヒツを持つ鉄鍛）の利用へ移行するにともなうものであったのだと考えられる。鑊は相当の大きな鉄塊を加工しなければならず、またヒツの鍛接工程をふくんでいるから、より強力な鞴を必要とした。いかえるならば、鑊は中国的な立作業、箱鞴の使用といった技術形式と一体のものであつて、マレー系の鍛造技術にはかならずしも見合わないものであつた。だから、ジャワやスマトラの在村鍛冶において、マレー系鍛造技術を保存している地域では、金床の位置を可能なかぎり高くして立作業にできるだけ適応するものにしなから、一方で親方座の床面を下げる工夫が広く普及して大型鍛造品に適応していくことになる。

インドネシア在来形式を強く残すトラジャの鍛冶の場合、すべての作業が座位によって土間上で行なわれており、もともと完結した中国式鍛冶技術の移入のみられるメダン近郊では、二方向から使用可能の炉が築かれて、それに二個の箱鞴が操着され、金床は木口を上に向けた木台の上におかれる（在来のインドネシアの鍛冶では丸太を横にねかして、その上に金床をすえる方法がとられていた）。この両者の間に様々の中間形態がみられるのが現状である。

このように、ひとくちにインドネシア在来技術といっても、実際の具体的内容は相当の幅があり、その上に鉄材料や燃料の入手の容易さにも差があるから、それらをひとまとめにした技術的展望はいだきがたいのが現実である。

そこで、インドネシア当局が「クラスター」として公的援助を行なっている地区のうちで、前述のスカブミ近郊チバトとは違った形で有力な産地を作っているスラウエンのマセベ、ワタンボン（ボネ）についてすこし補足しておく。これらの産地はブキスの広範囲にわたる移民によって商圈を拡大してきたもののようで、今日、カリマンタンをはじめマレーシア領であるサバ、サラワク等々に及んでいるという。そして、このブキスの産地の

経営状態をみると、仲買一仕入親方制が発達していることに気が付くのである。この親方を現地語でポンガワというらしいが、このポンガワによって材料購入、製品販売が行なわれて、それ故に広範囲の商品流通が可能になっているということであるらしい。ポンガワ制度の実体を知るにはもう少し詳しい調査を必要としている。

以上のような状態からみて、生産手段の改良ないし変更と製品需要のありかたとは密接につながっていることが容易に推測され、これらのクラスターの技術的改善等々は、純技術的視点からのみでは困難であることが想像される。基本的には製品の開発と共に、それに適応した生産手段を考えることで、地場に密着した発展を望みえると思われる。

3. 鑄造技術の技術的要求

前述のようにインドネシアの非鉄鑄造はかなりの程度、装飾的方向に発達しており、これに対して行政当局はなんらかの方法での工業化の方向をめざそうとしており、そのギャップに苦しんでいるものと思われる。いかにいえば、工業的非鉄鑄造技術がほとんど存在しないといてよい所へ、様々な方法で工作機械が導入され（先進工業国等からの援助によるもの他に、行政当局は各「クラスター」に共同利用施設としてマシーン・ショップを作ってきた）、その工作機械を有効に活用するために、機械加工の前段階である鑄造成型工程の必要が切実に感じられたからである。一例をあげると、前述のマセベは東インドネシア有数の鍛冶産地であるが、現在はかなり多様な鍛造—溶接製品へも進出している。なかでも手動耕耘機の部品等の機械部品の補充の必要からやゝ工業的製品を製作せざるをえない状況となっており、そのために共同利用のマシーン・ショップが作られ更にその原材料を供給するために鑄造（鋳鉄・非鉄）工場も設置された。しかし、現実にはこの地域はまったく鑄造技術の蓄積をもたないから、試作段階で行きずまり、ほとんど運転できない状態となっている。特に鋳鉄利用キューボラは溶解の失敗が続いた上にコークスの高価なことが加わり、ほとんど破棄された状態となっている。

こうしたマセベに類似した地区は少なくなく、鍛冶産地の発展のためには、鑄造部門がぜひ必要なことが自覚されながら、実際となるとほとんど有効に働いていないのである。

次にインドネシアの非鉄鑄造の技術をみると、生砂型、金型、ロウ型等が用いられており、このうち、生砂型と金型によって工業化を計ろうとしているようであるが、金型の使用が多いことが特徴といえそういえ、欠点といえ欠点を見ることが出来る。

なぜ金型なのか、という問題はいまだ十分に筆者には理解できないが、推測するに錫鑄造に由来するのではないかと思われる。錫鑄造とアルミあるいは真鍮鑄造との間には技術的に相当レベル差があるが、それを無視して、錫の金型へアルミ・真鍮が流されることから始まったもののようにみえる。したがって、鑄造の基本技術を欠落させた技法が用いられ、問題を持っているのである。

したがって、生砂型を正しく普及させることが現在もっとも重要なことであって、それによって生産性が上がり（現在の金型鑄造の不良品率はおどろくほど高い）、品質の確保が可能になる。しかし、砂型鑄造の普及を可能にするためにはいくつかの条件が必要である。ひとつはもっとも適切な溶解炉の供給であり、これには燃料の選択問題、もしくはバーナーの開発がかかわる。次に砂の供給であり、非鉄鑄造に適した良質の砂を探し出し、その広い流通を確保しなければならない。現在、中部ジャワの非鉄鑄造産地のパティの近郊ジュワナの砂とスマトラのバンカ島のもとが知られているが、それらの能力について十分実験した上で普及方法を考える必要がある。そして最後に、ある意味ではこれがもっとも重要な点であるが、木型製作技術を移転する必要があることである。

インドネシアの木工技術にカーヴィング等の装飾的方面には卓越したものがあることはよく知られているが、これが、木型製作技術となると非常に低いレベルにあるため、多くの場合、輸入された製品をそのまま原型として型取りすることが行なわれており、そのために出来上りでひとまわり小形の鑄造品が作られるという状態になっている。ことの良し悪しはともかく、このデッドコピーの結果、不都合の生じる場合も少なくない。そしておそらく金型鑄物の多様も木型製作技術（原型技術）の不足によって生じている面も少なくないと思われるのである。

4. CEVEST-ESTへの期待

以上のような現状からみて、インドネシア当局がCEVEST-ESTに技術研修を強く要求した理由は容易に理解できる。そして、その効果も十分に期待できるのである。しかし、だからといってCEVEST-ESTの研修計画だけでインドネシアの小規模工業開発の目的が十分に達せられると言えるといえ、それは当然ながら否である。前述のように現在もっとも望まれているのは共同利用施設の有効活用と、それを通しての各クラスターに適応した技術の開発なのである。したがって、もし、CEVEST-ESTの技術研修を受け継ぐ次期プロジェクトが考えられるとするならば、それは基本的生産手段の開発、技術訓練を行なうセンター（ここではCEVEST-ESTの設備を利用しうるであろう）と、より具体的な産地適応を可能とするための施設（これは「クラスター」直結型研究開発機構としてのエクステンション・ワークショップ）の設立がのぞましい。このような組織を通して、鑄造・鍛造を有機的に結合することで、在来型技術の中から、それぞれの地域に適した生産形態を生れてくるものと考えられる。

Ⅱ 計画打合せ調査関連

- ① Minutes of Discussion
- ② フォローアップ協力に係る「イ」側要請文書
- ③ CEVEST－EST研修運営経費（「イ」側負担，「日」側負担）
- ④ 昭和63年度各研修コースのカリキュラム（案）

II-① Minutes of Discussion

THE MINUTES OF DISCUSSIONS
BETWEEN THE JAPANESE CONSULTATION TEAM
AND AUTHORITIES CONCERNED OF THE GOVERNMENT
OF THE REPUBLIC OF INDONESIA
ON THE INDONESIA-JAPAN TECHNICAL COOPERATION IN THE
CENTER FOR VOCATIONAL AND EXTENSION SERVICE TRAINING (CEVEST)

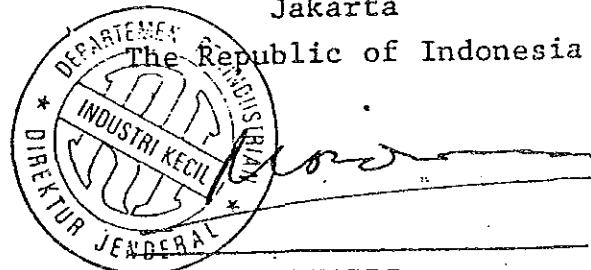
The Japanese Consultation Team (hereinafter referred to as "The Japanese Team") organized by the Japan International Cooperation Agency, executing agency for the Technical Cooperation of the Government of Japan (hereinafter referred to as "JICA"), headed by Mr. T. Sakata, Special Assistant to the Director of Mining and Industrial Development Cooperation Department, JICA, visited the Republic of Indonesia from April 25 to May 1, 1988, for the purpose of consulting with the Directorate General for Small Scale Industries, Ministry of Industry on the possible training courses to be held at the Center for Vocational and Extension Service Training (CEVEST).

As a result of the discussions both sides came to understanding concerning the matters referred to in Annex 1.

The list of participants from both sides at the meeting is attached in Annex 2.

April 30, 1988

Jakarta



TAKEHO SAKATA
Leader,
Japanese Consultation Team,
Japan International Cooperation
Agency, Japan

TRISURA SUHARDI
Director General for Small
Scale Industries,
Ministry of Industry,
The Republic of Indonesia

Annex 1

1. Both Indonesian and Japanese sides agreed to conduct the technical training and trainers training courses at the CEVEST-EST in accordance with the followings.

(1) The following five (5) courses will be implemented.

- | | |
|--------------------------------------------------|-----------------------------------|
| 1) Technical Training Non-Ferrous Casting Course | Aug.18 - Sep.28,1988 |
| 2) Technical Training Forging Course | Jan. 9 - Feb. 3,1989 |
| 3) Trainers Training 1st QC Course | Oct. 3 - Oct.29,1988 |
| 4) Trainers Training 2nd QC Course | Nov.28 - Dec.24,1988 |
| 5) Trainers Training AMTT Course | Oct. - Nov. ,1988 (two months) |

(Remarks) Both Indonesian and Japanese sides will continue to discuss the implementation of Regional Training Program (RTP).

(2) Objective Trainees
Extension Service Officers

(3) Training Subjects

- 1) Technical Training
 - . Practice to confirm the given technical knowledge
 - . Practice to obtain minimum skill needed for guidance of small industry
- 2) Trainers Training (QC Course)
Practice to obtain the quality control knowledge which will be of applicable to small industry of Indonesia in the near future.
- 3) Trainers Training (AMTT Course)
 - . Practice to obtain the methods of achievement motivation, marketing and other additional knowledge.

(4) Japanese Short Term Experts

If the Japanese side would successfully recruit the Short-term experts, the Japanese side would dispatch 9 persons in technical training and 3 persons in trainers training.

1) Technical Training

| | |
|---------------------------------------------|----------|
| Coordination, Planning and Basic Technology | 1 person |
| Technical Advisory and basic survey | 1 person |
| Non-Ferrous Casting Theory | 1 person |
| Sand Molding practice | 1 person |
| Gravity die casting practice | 1 person |
| Wood pattern making practice | 1 person |
| Forging Theory | 1 person |
| Forging practice | 1 person |
| Designing of cast and forged products | 1 person |

2) Trainers Training

| | |
|--------------------------|----------|
| Quality Control Theory | 1 person |
| Quality Control practice | 1 person |
| Marketing | 1 person |

(5) Instructors and Counterparts

(1) TPLS, Staff of Institutes or Centers of Ministry of Industry.

(2) Technical Counterparts of the CEVEST-EST

1) Technical Training Non-Ferrous

| | |
|----------------|-----------|
| Casting Course | 2 persons |
| Forging Course | 2 persons |

2) Trainers Training QC Course

| | |
|-------------|-----------|
| AMTT Course | 2 persons |
|-------------|-----------|

(6) Counterparts of Training in Japan

The Japanese side will accept four counterparts personnel for technical training.

(7) Number of Trainees
20 participants in each training course

(8) Equipment

- (1) Hand-practice-oriented equipment
- (2) Able to be purchased in Indonesia

2. Concerning implementation of the training courses, the measures to be taken by both sides are as follows.

(1) Measures to be taken by Indonesian side

- 1) Securing the necessary amount of budget for implementation of the training courses.
- 2) Assignment of technical counterparts personnel who are engaged in the training courses.
- 3) Submitting the relevant A-1, A-4 Forms and request for Japanese experts, equipment and budget respectively to the Japanese side through the official channels by May 31, 1988.

(2) Measures to be taken by the Japanese side

- 1) Dispatching necessary number of short-term experts in accordance with the Training Implementation Plan (refer to the attachment)
- 2) Provision of main-equipment necessary for implementation of the above-mentioned Training Courses.

3. The Indonesian side expressed that they would hope to extend the technical cooperation of CEVEST-EST as Phase II Project.
The Japanese Team stated that the Japanese side took notes of this request.

ATTACHMENT

CEVEST-EST TECHNICAL TRAINING IMPLEMENTATION PLAN (DRAFT)

| ITEM | 1988 | | | 1989 | | | | | | | | |
|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|---------------------------|------|------|------|------|------|------|------|------|
| | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. |
| JAPANESE SIDE | | | | | | | | | | | | |
| 1. Japanese Consultation Team ² | = | | | | | | | | | | | |
| 2. Arrival of A1 and A4 Form | * (A1, A4 form) | | | | | | | | | | | |
| 3. Local purchase of equipment | (Budgeting)* | | | Purchase and Installation | | | | | | | | |
| 4. Despatch of Short-term expert | Coordination, Planning and basic technology <u>Technical Advisory and basic survey</u> Non-Ferrous Casting theory, Sand molding practice Gravity die casting practice, Wood pattern making practice <u>Designing of cast and forged products</u> | | | | | | | | | | | |
| 5. Counterparts training in Japan | <u>Forging theory, Forging practice</u> Forging Course (2) N/Fe. Casting Crs. (2) | | | | | | | | | | | |
| INDONESIAN SIDE | | | | | | | | | | | | |
| 1. A1 and A4 Form | * (A1 and A4 submission) | | | | | | | | | | | |
| 2. Counterparts General N/Fe. Casting Course Forging Course | Training plan, management, etc. <hr/> | | | | | | | | | | | |
| 3. Implementation of training courses | Non-Ferrous Casting Course <hr/> Forging Course <hr/> | | | | | | | | | | | |

TS

CEVEST-EST TRAINERS TRAINING IMPLEMENTATION PLAN (DRAFT)

| ITEM | 1988 / 1989 | | | | | | | | | | | |
|---------------------------------------|-----------------------------------------|------|------|------|------|------|------|------|------|------|------|--|
| | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. | Jan. | Feb. | |
| JAPANESE SIDE | | | | | | | | | | | | |
| 1. Japanese Consultation Team | - | | | | | | | | | | | |
| 2. Arrival of A1 and A4 form | * (A1, A4 form) | | | | | | | | | | | |
| 3. Local purchase of equipment | (Budgeting)* Purchase | | | | | | | | | | | |
| 4. Despatch of short-term experts (3) | QC theory | | | | | | | | | | | |
| | QC practice | | | | | | | | | | | |
| | AMTT marketing | | | | | | | | | | | |
| INDONESIAN SIDE | | | | | | | | | | | | |
| 1. A1 and A4 form | → (A1 and A4 submission) | | | | | | | | | | | |
| 2. Counterparts | General Training plan, management, etc. | | | | | | | | | | | |
| | QC course | | | | | | | | | | | |
| | AMTT course | | | | | | | | | | | |
| 3. Implementation of training courses | QC course (1st) (2nd) | | | | | | | | | | | |
| | AMTT course | | | | | | | | | | | |

4

Annex 2

LIST OF PARTICIPANTS AT MEETING OF CEVEST-EST

JAPANESE PANEL

1. Mr. T. Sakata, Leader, Japanese Consultation Team
2. Mr. T. Kiyosawa, Sub-Leader, Japanese Consultation Team
3. Mr. T. Ishikawa, Member, Japanese Consultation Team

JICA INDONESIA OFFICE :

1. Mr. Taguchi, Staff, JICA Indonesia Office

JICA EXPERTS :

1. Mr. T. Kitabata, Expert, CEVEST - EST
2. Mr. T. Nishimura, Expert, CEVEST - EST
3. Mr. T. Sasaki, Expert, CEVEST - EST
4. Mr. Nofuku, Coordinator, CEVEST

INDONESIAN PANEL

- | | | |
|-----|-------------------------|-----------------------------------------------------------|
| 1. | Mr. Trisura Suhardi | Director General for Small Industries |
| 2. | Mr. Bintaldjemur | Secretary of the Directorate General for Small Industries |
| 3. | Mr. F. Lengkong | Director for Metal Industry |
| 4. | Mr. Hidayat Suwandi | Bureau for International Relation, Ministry of Industry |
| 5. | Mr. Sahat M. Nainggolan | Head of the PSP2-IK Project |
| 6. | Mr. Ayun Runlan | Secretary of the PSP2-IK Project |
| 7. | Mr. Made Dharma H | Coordinator of the HRD-CEVEST PSP2-IK Project |
| 8. | Mr. Sukardjo | Expert of the PSP2-IK Project |
| 9. | Mr. . S. Mailoa | ditto |
| 10. | Mr. Effendi Sirait | ditto |
| 11. | Mr. Mulyadi S | Counterpart Experts CEVEST - EST |
| 12. | Mr. Simon Duapadang | Sub Coordinator HRD-CEVEST PSP2-IK |
| 13. | Mr. Chr. Rogahang | ditto |
| 14. | Mr. Zulkifli Rasjid | ditto |



THE REPUBLIC OF INDONESIA - DEPARTMENT OF INDUSTRY
DIRECTORATE GENERAL OF SMALL INDUSTRIES

Jalan Jend. Gatot Subroto Kav. 52 - 53
Jakarta - Indonesia

P.O. Box. 3547
Phone 515509 - 515351

Number : 1409/DJIK/XII/87

Jakarta, December 31, 1987

Appendix : 1 Exp.

Subject : Training Program
EST-CEVEST 1988

Mr. Yasuo Kitano
Resident Representative
of JICA, in Indonesia.

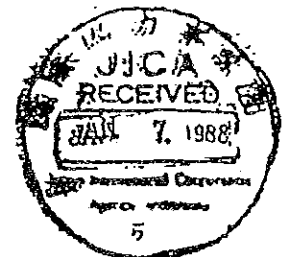
In accordance with the Minutes of Discussions on CEVEST, signed on November 15, 1987, covering Technical Cooperation Program namely Technical Training Course, Trainer Training Course and Regional Training Program, and conform with the letter from Team Leader of the CEVEST, dated Dec. 1st 1987, we herewith inform you that the activities could be implemented in cooperation with JICA.

The technical cooperation program mentioned is for :

1. Technical Training Course
 - a. Non Ferrous Casting 1.5 Months
 - b. Ferrous Forging 1 Month
2. Trainer Training Course
 - a. Fasilitator TQC/QCC for small Industry (two courses) 1 Month Respectively
 - b. Achievement Motivation Training Trainers (AMTT) 2 Months
3. Regional Training Program 2 Weeks

Seminar on Management and Technical Training for Small Industry

A brief.



THE REPUBLIC OF INDONESIA — DEPARTMENT OF INDUSTRY
DIRECTORATE GENERAL OF SMALL INDUSTRIES

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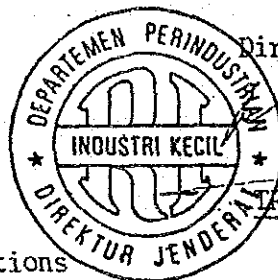
Number :
Appendix :
Subject :

A brief time shedule of Training Activities is also attached herewith.

Thank you very much your kind attenion and cooperation.

Sincerely Yours,

Director General,



TRISURA SUHARDI

CC :

1. Head Bureau for International Relations
Ministry of Industry.
2. The Secretary and Director of Metal, DGSI.
3. Mr. Sumida, Team Leader Expert CEVEST
4. F i l e . -

II-③ CEVEST-EST 研修運営経費（「イ」側負担，「日」側負担）

（単位：千R/P）

| 研修コース | 年次 | 1985/86 | | 1986/87 | | 1987/88 | | 1988/89 | |
|------------------------------------------|----|---------|--------|---------|-----------------------|---------|-----------------------|---------|--------|
| | | 「イ」側負担 | 「日」側負担 | 「イ」側負担 | 「日」側負担 | 「イ」側負担 | 「日」側負担 | 「イ」側負担 | 「日」側負担 |
| 。 経営研修 | | 36,944 | 57,500 | 47,000 | 0 | (予算未確定) | 322,325 (24,819千円) | | |
| 。 技術研修 | | — | — | 10,000 | 150,326 (13,824千円) | | 212,301 (16,348千円) | | |
| 計 | | 36,944 | 57,500 | 57,000 | 150,326 | | 534,626 (41,167千円) | | |
| (実施コース数) | | | | | | | | | |
| 1. 経営研修 | | 3 | 3 | 2 | | | 3 | | |
| 。 技術研修 | | — | — | 2 | | | 2 | | |
| (CEVESTの予算 で運営されたコース) | | | | | | | | | |
| 2. その他(CEVEST 以外の予算で「イ」 側が開催したコース) | | 6 | 6 | — | | | — | | |

II-④ 1988年度各研修コースのカリキュラム(案)

MADE
HOTIAR

DRAFT TIME TABLE OF TECHNICAL TRAINING CASTING COURSE

18 AUGUSTUS 1988 - 29 SEPTEMBER 1988

| DATE | DAY | HOURS | SUBJECT | INSTRUCTOR |
|--------------|------|---------------|-------------------------------------------------------------|------------------|
| Augustus, 18 | THU | 9.30 - 12.00 | Opening Ceremony | D G S I |
| | | 12.00 - 13.30 | Luncheon Party | |
| | | 13.30 - 14.20 | Orientation For The Training Course. | Steering Cometty |
| | | 14.20 - 15.10 | Life Guidance By Administration Office | Steering Cometty |
| | | 15.10 - 15.40 | Coffe Break | |
| | | 15.40 - 17.00 | Policy for Development of Small Scale Industry | D G S I |
| August 19 | FRI | 8.00 - 9.30 | History of Casting | |
| | | 9.30 - 9.45 | Coffe Break | |
| | | 9.45 - 11.45 | Out Line Nonferrous And Nonperrous Alloy of Metal Casting I | |
| | | 11.45 - 13.30 | Praying/Lunch Time | |
| | | 13.30 - 15.30 | Practice Casting Equipment. | |
| | | 15.30 - 15.45 | Coffee Break | |
| August 20 | SAT. | 8.00 - 10.00 | Nonferrous Metal Casting | |
| | | 10.00 - 10.15 | Coffee Break | |
| | | 10.15 - 12.15 | Nonferrous Metal Casting | |
| | | 12.15 - 13.15 | Lunch Time | |
| | | 13.15 - 15.15 | Practice Casting I | |
| | | 15.15 - 15.30 | Coffee Break | |
| | | 15.30 - 17.00 | Practice Casting I | |

| | | | |
|------------|------|---------------|----------------------------------------------------------------------------|
| August' 22 | MGN | 8.00 - 10.00 | Nonferrous Alloy Metal Casting. I. |
| | | 10.00 - 10.15 | Cofee Break |
| | | 10.15 - 12.15 | Nonferrous Alloy Metal Casting. I. |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Casting II. |
| | | 15.15 - 15.30 | Cofee Break |
| | | 15.30 - 17.00 | Practice Casting II. |
| August' 23 | TUE | 8.00 - 10.00 | Nonferrous Alloy Metal Casting II. |
| | | 10.00 - 10.15 | Cofee Break |
| | | 10.15 - 12.15 | Nonferrous Alloy Metal Casting II. |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Casting III |
| | | 15.15 - 15.30 | Cofee Break |
| | | 15.30 - 17.00 | Practice Casting III |
| August' 24 | WED, | 8.00 - 10.00 | Fundamental Processes of Nonferrous Metal Casting I (Gating Sistym Design) |
| | | 10.00 - 10.15 | Cofee Ereak |
| | | 10.15 - 12.15 | Fundamental Processes of Nonferrous Metal Casting I (Gating Sistym Design) |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Casting IV. |
| | | 15.15 - 15.30 | Cofee Break |
| | | 15.30 - 17.00 | Practice Casting IV. 8 |

| | | | | |
|--------|----|-----|---------------|------------------------------------------------------------------------------------|
| August | 25 | THU | 8.00 - 10.00 | Fundamental Processes of Nonferrous Metal Casting II (Wood Patern Making) |
| | | | 10.00 - 10.15 | Cofee Break |
| | | | 10.15 - 12.15 | Fundamental Processes of Nonferrous Metal CastingII (Wood Pattern Making) |
| | | | 12.15 - 13.15 | Lunch Time |
| | | | 13.15 - 15.15 | Practice Casting V |
| | | | 15.15 - 15.30 | Cofee Break |
| | | | 15.30 - 17.00 | Practice Casting V |
| August | 26 | FRY | 8.00 - 9.30 | Fundamental Processes of Nonferrous Metal Cast, III. (Sand Molding & Core Making) |
| | | | 9.30 - 9.45 | Cofee Break. |
| | | | 9.45 - 11.45 | Fundamental Processes of Nonferrous Metal CastingIII. (Sand Molding & Core Making) |
| | | | 11.45 - 13.30 | Praying/Lunch Time |
| | | | 13.30 - 15.30 | Practice Casting VI. |
| | | | 15.30 - 15.45 | Cofee Break. |
| | | | 15.45 - 17.15 | Practice Casting VI. |
| August | 27 | SAT | 8.00 - 10.00 | Fundamental Process of Nonferrous Metal Casting IV. (Molten Metal Making) |
| | | | 10.00 - 10.15 | Cofee Break |
| | | | 10.15 - 12.15 | Fundamental Process Of Nonferrous Metal Casting IV. (Molten Metal Making) |
| | | | 12.15 - 13.15 | Lunch Time |
| | | | 13.15 - 15.15 | Practice Casting VII |
| | | | 15.15 - 15.30 | Cofee Break |
| | | | 15.30 - 17.00 | Practice Casting VII. |

| | | | | |
|--------|----|-----|---------------|-----------------------------------------------------------------------------------------|
| August | 29 | MON | 8.00 - 10.00 | Fundamental Process of Non ferrous Metal Casting V. (Pouring Method Finishing & Repair) |
| | | | 10.00 - 10.15 | Coffee Break |
| | | | 10.15 - 12.15 | Fundamental Process of Non ferrous Metal Casting V (Pouring Method Finishing & Repair) |
| | | | 12.15 - 13.15 | Lunch Time |
| | | | 13.15 - 15.15 | Practice Casting VIII. |
| | | | 15.15 - 15.30 | Coffee Break |
| | | | 15.30 - 17.00 | Practice Casting VIII. |
| August | 30 | TUE | 8.00 - 10.00 | Scrap Material Selection |
| | | | 10.00 - 10.15 | Coffee Break |
| | | | 10.15 - 12.15 | Scrap Material Selection |
| | | | 12.15 - 13.15 | Lunch Time |
| | | | 13.15 - 15.15 | Practice Casting IX |
| | | | 15.15 - 15.30 | Coffee Break |
| | | | 15.30 - 17.00 | Practice Casting IX. |
| August | 31 | WED | 8.00 - 10.00 | Control & Inspection of Nonferrous Metal Casting |
| | | | 10.00 - 10.15 | Coffee Break |
| | | | 10.15 - 12.15 | Control & Inspection of Nonferrous Metal Casting |
| | | | 12.15 - 13.15 | Lunch Time |
| | | | 13.15 - 15.15 | Practice Casting X. |
| | | | 15.15 - 15.30 | Coffee Break |
| | | | 15.30 - 17.00 | Practice Casting X. |

| | | | |
|--------------|-----|---------------|---------------------------------------------------|
| September, 1 | THU | 8.00 - 10.00 | Fundamental Processes of Gravity Dies Casting I |
| | | 10.00 - 10.15 | Coffee Break. |
| | | 10.15 - 12.15 | Fundamental Processes of Gravity Dies Casting I. |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Casting XI. |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | Practice Casting XI. |
| September, 2 | FRY | 8.00 - 9.30 | Fundamental Processes of Gravity Dies Casting II. |
| | | 9.30 - 9.45 | Coffee Break |
| | | 9.45 - 11.45 | Fundamental Processes of Gravity Dies Casting II. |
| | | 11.45 - 13.30 | Praying /Lunch Time |
| | | 13.30 - 15.30 | Practice Casting XII. |
| | | 15.30 - 15.45 | Coffee Break |
| | | 15.45 - 17.15 | Practice Casting XII. |
| September, 3 | SAT | 8.00 - 10.00 | Basic Drawing I |
| | | 10.00 - 10.15 | Coffee Break |
| | | 10.15 - 12.15 | Basic Drawing I |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Drawing I |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | Practice Drawing I. |

| | | | |
|--------------|-----|---------------|-----------------------|
| September, 5 | MON | 8.00 - 10.00 | Mechanical Drawing II |
| | | 10.00 - 10.15 | Cofee Braak |
| | | 10.15 - 12.15 | Mechanical Drawing II |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Drawing II |
| | | 15.15 - 15.30 | Cofee Break |
| | | 15.30 - 17.00 | Practice Drawing II. |

| | | | |
|--------------|-----|---------------|----------------------|
| September, 6 | TUE | 8.00 - 10.00 | Machining I. |
| | | 10.00 - 10.15 | Cofee Break |
| | | 10.15 - 12.15 | Machining I. |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Machining I |
| | | 15.15 - 15.30 | Cofee Break |
| | | 15.30 - 17.00 | Practice Machining I |

| | | | |
|--------------|-----|---------------|-----------------------|
| September, 7 | WED | 8.00 - 10.00 | Machining II. |
| | | 10.00 - 10.15 | Cofee Break |
| | | 10.15 - 12.15 | Machining II. |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Machining II |
| | | 15.15 - 15.30 | Cofee Break |
| | | 15.30 - 17.00 | Practice Machining II |

| | | | |
|---------------|-----|---------------|-----------------------------------------------------------------|
| September, 8 | THU | 8.00 - 10.00 | Discussion of Wood Pattern Making. |
| | | 10.00 - 10.15 | Coffee Break. |
| | | 10.15 - 12.15 | Continued Discussion of Wood Pattern Making |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Casting XIII |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | Practice Casting XIII. |
| September, 9 | FRI | 8.00 - 9.30 | Discussion of Sand Molding |
| | | 9.30 - 9.45 | Coffee Break |
| | | 9.45 - 11.45 | Continued Discussion of Sand Molding. |
| | | 11.45 - 13.30 | Praying / Lunch Time. |
| | | 13.30 - 15.30 | Practice Casting XIV |
| | | 15.30 - 15.45 | Coffee Break |
| | | 15.45 - 17.15 | Practice Casting XIV. |
| September, 10 | SAT | 8.00 - 10.00 | Discussion of Metal Making of Aluminium Alloy. |
| | | 10.00 - 10.15 | Coffee Break. |
| | | 10.15 - 12.15 | Continued Discussion of Molten Metal Making of Aluminium Alloy. |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Casting XV. |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | Practice Casting XV. |

| | | | |
|---------------|-----|---------------|------------------------------------------------------------------------|
| September, 12 | MON | 8.00 - 10.00 | Discussion of Molten Metal Making of Copper Alloy |
| | | 10.00 - 10.15 | Coffee Break |
| | | 10.15 - 12.15 | Continued Discussion of molten metal making of copper alloy |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Casting XVI. |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | Practice Casting XVI. |
| September, 13 | TUE | 8.00 - 10.00 | Discussion of Gravity Dies Casting |
| | | 10.00 - 10.15 | Coffee Break |
| | | 10.15 - 12.15 | Continued Discussion of Gravity Dies Casting |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Casting XVII. |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | Practice Casting XVII. |
| September, 14 | WED | 8.00 - 10.00 | Discussion Control & Inspection of nonferrous metal product |
| | | 10.00 - 10.15 | Coffee Break |
| | | 10.15 - 12.15 | Continued Discussion Control & Inspection of Nonferrous Metal Casting. |
| | | 12.15 - 13.15 | Lunch Time. |
| | | 13.15 - 15.15 | Practice Control and Inspection |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | Practice Control & Inspection |

| | | | |
|---------------|-----|----------------|-------------------------------------------------------------------------------|
| September, 15 | THU | 8.00 - 10.00 | Calculation Cost Production of Nonferrous Metal Casting I |
| | | 10.00 - 10.15 | Coffee Break. |
| | | 10.15 - 12.15 | Calculation Cost Production of Nonferrous Metal Casting I |
| | | 12.15 - 13.15 | Lunch Time. |
| | | 13.15 - 15.15 | Practice Casting XVIII. |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | Practice Casting XVIII. |
| September, 16 | FRI | STUDY ON FIELD | |
| September, 17 | SAT | STUDY ON FIELD | |
| September, 19 | MON | 8.00 - 10.00 | Discussion of Flux & Alloy Elements of Nonferrous Metal Casting |
| | | 10.00 - 10.15 | Coffee Break |
| | | 10.15 - 12.15 | Continued Discussion of Flux & Alloying Elements of Nonferrous Metal Casting. |
| | | 12.15 - 13.15 | Lunch Time. |
| | | 13.15 - 15.15 | Practice Casting XIX. |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | Practice Casting XIX. |

| | | | |
|---------------|-----|---------------|------------------------------------------------------------|
| September, 20 | TUE | 8.00 - 10.00 | Discussion Pouring Method Finishing & Repair. |
| | | 10.00 - 10.15 | Coffee Break |
| | | 10.15 - 12.15 | Continued Discussion of Pouring Method Finishing & Repair. |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Casting XX. |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | Practice Casting XX. |

| | | | |
|---------------|-----|---------------|-----------------------------------------|
| September, 21 | WED | 8.00 - 10.00 | Discussion of Scrap Material |
| | | 10.00 - 10.15 | Coffee Break. |
| | | 10.15 - 12.15 | Continued Discussion of Scrap Material. |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Casting XXI. |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | Practice Casting XXI. |

| | | | |
|---------------|-----|---------------|-------------------------------------------------------------|
| September, 22 | THU | 8.00 - 10.00 | Discussion Others Nonferrous Metal Casting Method |
| | | 10.00 - 10.15 | Coffee Break |
| | | 10.15 - 12.15 | Continued Discussion Other Non ferrous metal casting Method |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Casting XXII |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | Practice Casting XXII. |

| | | | | |
|---------------|-----|---------------|-----------------------------|--|
| September, 23 | FRY | 8.00 - 9.30 | Discussion How To Selection | |
| | | | Furnace | |
| | | 9.30 - 9.45 | Coffee Break | |
| | | 9.45 - 11.45 | Continued Discussion for | |
| | | | How To Select Furnace | |
| | | 11.45 - 13.30 | Lunch Time | |
| | | 13.30 - 15.30 | Practice Casting XXIII | |
| | | 15.30 - 15.45 | Coffee Break | |
| | | 15.45 - 17.15 | Practice Casting XXIII | |
| September, 24 | SAT | 8.00 - 10.00 | Discussion lay-out of Non | |
| | | | ferrous metal casting in | |
| | | | dustries | |
| | | 10.00 - 10.15 | Coffee Break | |
| | | 10.15 - 12.15 | Continued of Discussion | |
| | | | Lay-out Non ferrous metal | |
| | | | Casting Industries | |
| | | 12.15 - 13.15 | Lunch Time | |
| | | 13.15 - 15.15 | Practice Casting XXIV | |
| | | 15.15 - 15.30 | Coffee Break | |
| | | 15.30 - 17.00 | Practice Casting XXIV | |
| September, 26 | MON | 8.00 - 10.00 | Discussion Of Crussibel | |
| | | | Furnace | |
| | | 10.00 - 10.15 | Coffee Break | |
| | | 10.15 - 12.15 | Continued Discussion Of | |
| | | | Crussibel Furnace | |
| | | 12.15 - 13.15 | Lunch Time | |
| | | 13.15 - 15.15 | Practice Of Furnace Cons | |
| | | | truction | |
| | | 15.15 - 15.30 | Coffee Break | |
| | | 15.30 - 17.00 | Practice Of Furnace Cons | |
| | | | truction | |

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| | | | |
|---------------|-----|---------------|----------------------------------------------|
| September, 27 | TUE | 8.00 - 10.00 | Discussion of crussibel furnace |
| | | 10.00 - 10.15 | Cofee Break |
| | | 10.15 - 12.15 | Continued Discussion Of Crussible Furnace |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | Practice Of Furnace - Constraction |
| | | 15.15 - 15.30 | Cofee Break |
| | | 15.30 - 17.00 | Practice Of Furnace - Constraction |
| September, 28 | WED | 8.00 - 10.00 | General Evaluation |
| | | 10.00 - 10.15 | Coffee Break |
| | | 10.15 - 12.15 | General Evaluation |
| | | 12.15 - 13.15 | Lunch Time |
| | | 13.15 - 15.15 | General Evaluation |
| | | 15.15 - 15.30 | Coffee Break |
| | | 15.30 - 17.00 | General Evaluation |
| September, 29 | THU | 8.30 - 9.20 | Free Dissussion |
| | | 9.30 - 10.20 | Announcement Of Ad - ministration Office |
| | | 10.30 - 12.00 | Clossing Ceremony |
| | | 12.00 - — | Farewell Luncheon - Party |

Concept: Forging - I

DRAFT TIME TABLE OF TECHNICAL TRAINING - FORGING COURSE

Dated : 9 January 1989 until 4 February 1989.-

| Date | Day | Hours | Program/Subject | Instructor | |
|--------|-----|---------------|------------------------------------------------------|------------|--|
| Jan 9 | Mon | 9.30-12.00 | Opening Ceremony | | |
| | | 12.00- 13.20 | Lunch and party | | |
| | | 13.00 - 15.10 | Orientation of the training course | | |
| | | 15.20 - 17.00 | Policy for the development for Small Scale Industry! | | |
| | | | | | |
| Jan 10 | Tue | 8.00 - 10.00 | History of Forging | | |
| | | 10.00 - 10.15 | Coffee break | | |
| | | 10.15 - 12.00 | Outline of metal alloy of forging | | |
| | | 12.00 - 13.00 | Lunch time | | |
| | | 13.00 - 15.30 | Practice in the Workshop | | |
| | | | | | |
| | | 15.30 -15.45 | Coffee break | | |
| | | 15.45 - 17.00 | Practice in the Workshop | | |
| | | | | | |
| Jan 11 | Wed | 8.00 - 10.00 | Structure of iron & Steel | | |
| | | 10.00 -10.15 | Coffee break | | |
| | | 10.15 -12.00 | Iron Carbon Steel | | |
| | | 12.00 - 13.00 | Lunch time | | |
| | | 13.00 - 15.30 | Practice in the Workshop | | |
| | | 15.30 - 15.45 | Coffee break | | |
| | | 15.45 - 17.00 | Practice in the Workshop | | |
| Jan 12 | Thu | 8.00 - 10.00 | Selection of Script and materials I | | |
| | | | Coffee break | | |
| | | 10.00 - 10.15 | | | |
| | | 10.15 - 12.00 | Selection of Script and materials II | | |
| | | | | | |
| | | 12.00 - 13.00 | Lunch time | | |
| | | 13.00 - 15.30 | Practice in the Workshop | | |
| | | 15.30 -15.45 | Break | | |
| | | 15.45 - 17.00 | Practice in the Workshop | | |

| ate | Day | Hours | Program /Subject | Instructor |
|--------|---------------|--------------------------|----------------------------------------------|------------|
| Jan 13 | Fri | 8.00 - 9.30 | Principles of Smithery | |
| | | 9.30 - 9.45 | Cofee break | |
| | | 9.45 - 11.45 | The Smithery Shop and equipments | |
| | | 11.45 - 13.30 | praying/lunch time | |
| | | 13.30 - 15.30 | Practice in the Workshop | |
| | | 15.30 - 15.45 | cofee break | |
| | | 15.45 - 17.00 | Practice in the Workshop | |
| Jan 14 | Sat | 8.00 - 10.00 | Principles and Method of Forging | |
| | | | Furnace and Smithery Furnace | |
| | | 10.00 - 10.15 | Cofee break | |
| | | 10.15 - 12.00 | Materials Knowledge used for for- | |
| | | | ging Furnace and Smithery furnace | |
| | | 12.00 - 13.00 | Lunch time | |
| | | 13.00 - 15.00 | Practice in the Workshop | |
| | 15.00 - 15.15 | Cofee break | | |
| | 15.15 - 17.00 | Practice in the Workshop | | |
| Jan 16 | Mon | 8.00 - 10.00 | Fundamental of Heat Treatment. | |
| | | 10.00 - 10.15 | Cofee break | |
| | | 10.15 - 12.00 | Principle and Method Heat Treatment of Steel | |
| | | 12.00 - 13.00 | Lunch time | |
| | | 13.00 - 15.00 | Practice in the Workshop | |
| | | 15.00 - 15.15 | Coffee break | |
| | | 15.15 - 17.00 | Practice in the Workshop | |
| Jan 17 | Tue | 8.00 - 10.00 | Case Hardening and Surface treatment | |
| | | 10.00 - 10.15 | Cofee break | |
| | | 10.15 - 12.00 | Miscellaneous of Carburizing | |
| | | 12.00 - 13.00 | Lunch time | |
| | | 13.00 - 15.00 | Practice in the Work Shop | |
| | | 15.00 - 15.15 | Cofee break | |
| | | 15.15 - 17.00 | Practice in the Workshop | |

| Date | Day | Hours | Program/Subject | Instructor |
|---------------|--------------------------|---------------|-----------------------------------------|------------|
| Jan 18 | Wed | 8.00 - 10.00 | Basic drawing I | |
| | | 10.15 - 10.15 | Coffee break | |
| | | 10.15 - 12.00 | Basic drawing I | |
| | | 12.00 - 13.00 | Lunch time | |
| | | 13.00 - 15.00 | Practice drawing | |
| | | 15.00 - 15.15 | Coffee break | |
| | | 15.15 - 17.00 | Practice drawing | |
| Jan 19 | Thu | 8.00 - 10.00 | Mechanical Drawing | |
| | | 10.00 - 10.15 | Coffee break | |
| | | 10.15 - 12.00 | Mechanical drawing | |
| | | 12.00 - 13.00 | Lunch time | |
| | | 13.00 - 15.00 | Practice drawing | |
| | | 15.00 - 15.15 | Coffee break | |
| | | 15.15 - 17.00 | Practice drawing | |
| Jan 20 | Fri | 8.00 - 9.30 | The Corrosion problem I | |
| | | 9.30 - 9.45 | Coffee break | |
| | | 9.45 - 11.45 | The corrosion problem II | |
| | | 11.45 - 13.30 | Praying / lunch time | |
| | | 13.30 - 15.30 | Method of protection about Corrosion I | |
| | | 15.30 - 15.45 | Coffee break | |
| | | 15.45 - 17.00 | Method of Protection about Corrosion II | |
| Jan 21 | Sat | 8.00 - 10.00 | Finishing by hand tools | |
| | | 10.00 - 10.15 | Coffee break | |
| | | 10.15 - 12.00 | Common knowledge of tools for Finishing | |
| | | 12.00 - 13.00 | Lunch time | |
| | | 13.00 - 15.00 | Practice in the Work shop | |
| | | 15.00 - 15.15 | Coffee break | |
| | | 15.15 - 17.00 | Practice in the Workshop | |
| Jan 23 | Mon | 8.00 - 10.00 | Forging Furnace Temperatur Control I | |
| | | 10.00 - 10.15 | Coffee break | |
| | | 10.15 - 12.00 | Forging Furnace Temperatur Control II | |
| | | 12.00 - 13.00 | Lunch time | |
| | | 13.00 - 15.00 | Practice in the Workshop | |
| | | | Furnace | |
| | | 15.00 - 15.15 | Coffee break | |
| 15.15 - 17.00 | Practice in the Workshop | | | |

| Date | Day | Hours | Program/Subject | Instructor |
|-------------|--------------------------|---------------|--------------------------------------------|------------|
| Jan 24 | Tue | 8.00- 10.00 | Quality Inspection I | |
| | | 10.00-10.15 | Coffee break | |
| | | 10.15-12.00 | Quality Inspection II | |
| | | 12.00 -13.00 | Lunch time | |
| | | 13.00 -15.00 | Practice in the Workshop | |
| | | 15.00 - 15.15 | Coffee break | |
| | | 15.15 -17.00 | Practice in the Workshop | |
| Jan 25 | Wed | 8.00 -10.00 | Discussion of Selection Materials | |
| | | | Script | |
| | | 10.00-10.15 | Coffee break | |
| | | 10.15-12.00 | Continued of discussion Materials | |
| | | | Script | |
| | | 12.00-13.00 | Lunch time | |
| | | 13.00-15.00 | Practice in the Workshop | |
| 15.00-15.15 | Coffee break | | | |
| 15.15-17.00 | Practice in the Workshop | | | |
| Jan 26 | Thu | 8.00 -10.00 | Discussion of Heat Treatment | |
| | | 10.00-10.15 | Coffee break | |
| | | 10.15 -12.00 | Continued Discussion of Heat Treatment | |
| | | 12.00 -13.00 | Lunch time | |
| | | 13.00- 15.00 | Practice in the Workshop | |
| | | 15.00 -15.15 | Coffee break | |
| | | 15.15-17.00 | Practice in the workshop | |
| Jan 27 | Fri | 8.00 -9.30 | Discussion of Temperatur Control | |
| | | 9.30 -9.45 | Coffee break | |
| | | 9.45- 11.45 | Continued discussion of Temperatur Control | |
| | | 11.45-13.30 | Praying/lunch time | |
| | | | Study on the field | |
| | | | | |
| Jan 28 | Sat | | Study on the field | |
| Jan 30 | Mon | 8.00 -10.00 | Tools Steel (knowledge) I | |
| | | 10.00 -10.15 | Coffee break | |
| | | 10.15- 12.00 | Tools Steel (Knowledge) II | |
| | | 12.00 -13.00 | Lunch time | |
| | | 13.00 - 15.00 | Practice in the Workshop | |
| | | 15.00 -15.15 | Coffee break | |
| | | 15.15 -17.00 | Practice in the Workshop | |

| Date | Day | Hours | Program /Subject | Instructor |
|--------|-----|---------------|------------------------------------|------------|
| Jan 31 | Tue | 8.00 -10.00 | Forging Machines and tools | |
| | | 10.00 -10.15 | Coffee break | |
| | | 10.15-12.00 | Dies, Jig and Pictures for Forging | |
| | | 12.00 -13.00 | Lunch time | |
| | | 13.00 -15.00 | Safety Equipment and personnel | |
| | | | Safety for Forging Shop | |
| | | 15.00 - 15.15 | Break (Coffee) | |
| | | 15.15 - 17.00 | Fire safety for Forging Shop | |
| Feb 1 | Wed | 8.00 - 10.00 | Plant lay out I | |
| | | 10.00 -10.15 | Coffee break | |
| | | 10.15 -12.00 | Plant lay out II | |
| | | 12.00 - 13.00 | Lunch time | |
| | | 13.00 - 15.00 | Practice Workshop | |
| | | 15.00 -15.15 | Break (Coffee or tea | |
| | | 15.15 -17.00 | Practice Workshop | |
| Feb 2 | Thu | 8.00 - 10.00 | Product knowledge and disain I | |
| | | 10.00-10.15 | Cofee break | |
| | | 10.15- 12.00 | Product knowledge and disain II | |
| | | 12.00 -13.00 | Lunch time | |
| | | 13.00 -15.00 | Practice Workshop | |
| | | 15.00 -15.15 | Coffee break | |
| | | 15.15 -17.00 | Practice Workshop | |
| Feb 3 | Fri | 8.00 -9.30 | Examination | |
| | | 9.30 -9.45 | Coffee break | |
| | | 9.45 -11.45 | Examination | |
| | | 11.45 -13.30 | Praying/lunch time | |
| | | 13.30 -15.30 | Examination | |
| | | 15.30 -17.00 | General Evaluation | |
| Feb 4 | Sat | 8.00 -10.20 | Review of the training course | |
| | | 10.30 -12.20 | Closing Ceremony | |
| | | 12.20 - | Lunch party | |

TABLE OF CONTENT

(Trainers Training "Quality Control Course")

P R E F A C E TABLE OF CONTENT

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- A.2. Water tap
- A.3. Insect Spray

B. Chemical and Building Material Sector

- B.1. Essential Oil
- B.2. Rubber components for Vehicles
- B.3. Ceramic Isolator

C. Food Sector

- C.1. Flour (view kinds)
- C.2. Coffee powder
- C.3. Lemon syrup

D. Textile and Leather Sector

- D.1. Working Shoes
- D.2. Leather Glove
- D.3. Silk textile

CHAPTER 11 SCOPE OF WORK

This User's guide book for simple testing tools is covered simple testing tools/supporting tools for production in the sector of :

A. Metal Sector

- A.1. Water meter box
- A.2. Water tap
- A.3. Insect Spray

B. Chemical and Building Material Sector

- B.1. Essential Oil
- B.2. Rubber components for Vehicles
- B.3. Ceramic Isolator

C. Food Sector

- C.1. Flour (view kinds)
- C.2. Coffee powder
- C.3. Lemon syrup

D. Textile and Leather Sector

- D.1. Working Shoes
- D.2. Leather Glove
- D.3. Silk textile

CHAPTER 11 USER'S GUIDE FOR SIMPLE TESTING TOOLS FOR SMALL INDUSTRY

User's guide of simple tools is compiled based on the sector of industry and kind of commodity covered.

- A. Metal Sector
 - A.1. Water meter box
 - A.2. Water tap
 - A.3. Insect Spray

- B. Chemical and Building Material Sector
 - B.1. Essential Oil
 - B.2. Rubber components for Vehicles
 - B.3. Ceramic Isolator

- C. Food Sector
 - C.1. Flour (view kinds)
 - C.2. Coffee powder
 - C.3. Lemon syrup

- D. Textile and Leather Sector
 - D.1. Working Shoes
 - D.2. Leather Glove
 - D.3. Silk textile

Trainers Training "Marketing Instructor Training Course" Curriculum Draft

1. Background

A great number of Indonesian entrepreneurs are indigenous Pribumi small scale traders and manufacturers. Most of their business are family owned. They do not really distinguish between household and professional managements. The scale of business is usually not larger than cottage industry. Their motivations as professional managers are also not fully developed yet. Though it is important to improve production skills, such as through the development of QC, to promote small scale Pribumi industries, without adequate guidance and training on sales as well as marketing strategies the improvement in production technics does not benefit them. The increase in profit, thanks to technical improvements, may only drop in the hands of Chinese distributors whom they depend on to market products.

Under such circumstances, the Department of Industry has been actively pursuing an original so called AMTT program (Motivation Achievement Trainers Training) adopting Psychological methods to train marketing instructors. The participants of the program, after receiving a series of theoretical training in the fields of marketing, psychology and so on, are assigned to train medium and small scale business men for a week who are sent from various regions (about 20 people). During the training they stay at the Training Center of the Department of Industry). Instructors of the Department of Industry observe and evaluate the performances of the participants.

This is a kind of on the job training. After the initial teaching exercise, a month later they give another training to another group of 20 trainees for a week. At the end of the program they are also assigned to draw guidance planning

to small and medium scale traders and manufacturers for their assigned region. The training course is designed to give training to the future instructors, on one hand. On another hand, it aims to train small and medium scale traders and manufacturers at the same time.

The following curriculums are designed on the basis of applied psychology. The Indonesian side strongly requests Japanese assistances particularly by dispatching short term experts in the fields of marketing theories as well as policy issues towards small and medium scale industries including sub-contractors. (Kitabata is planned to teach on such issues.) since they have difficulties in finding suitable instructors.

2. Curriculum Draft (Under discussion with the Department of Industry)

The period---2 months, about 400 hours

The First Part (about 200 hours)

1.* Entrepreneurship about 8 h.

2. Guidance/training methods towards small and medium scale industries

8 h.

3. Group discussions among participants I.

32 h.

(unacknowledged stage →awaring stage →consciously taking action →setting goal

4.**Introduction to marketing theory, Simple business game

8 h.

5. Drawing medium and small scale industries guidance planning I

8 h.

- 6.Seminar I 8 h.
- 7.Review 8 h.
- 8.*Training exercise to small and medium scale industries trainees (group A)
48h.
- (Marketing 8, Business game 8, Psychology test 16, entrepreneurship motivation achievement 8, goal setting 8)
- 9.Evaluation of participants' performances by Indonesian instructors
16 h.
- 10.**Synthetical theory studies 60 h.
- Psychology 8 h.
- ** Marketing theory (remarks) 40 h.
- ** Japanese small and medium scale industries guidance measures
 (remarks) 4 h.
- **Seminar on guidance to sub-contractors
 (remarks) 8 h.
- 11.* Field trip(Japanese firms, small and medium industries, shopping centers,
production areas) 24 h.

The Second Part (about 200 h.)

- 12.Drawing small and medium scale industries guidance planning II
8 h.
13. " (group discussion) 32 h.
- 14.Seminar II 40 h.
- 15.*Training exercise to small and medium scale industries trainees (group B) II
48 h.

16. Evaluation of performances by Indonesian instructors

16 h.

17. *Guidance planning to the assigned region

32 h.

18. Discussion on the planning (group) 8 h.

19. Evaluation on the planning (group) 4 h.

20. The evaluation of total program 4 h.

Total 400 hours = 8 h./ day X 25 days X 2 months. Out of this, about 100 hours are either instructed (**) or participated (*) by Japanese instructors.

Remarks:

Syllabus of marketing theory (draft, needs to discuss with short term experts as well as the Department of Industry)

*Marketing and Management

*Market research

*Product planning

*Sales organization

*Sales promotion

*Advertisement

* sales man activities

*Business game

*Book-keeping

*Others

The total hours will be about 40.

Remarks:

Japanese small and medium scale industries guidance measures

Current Japanese policies to small and medium industries are introduced briefly by Kitabata.

Remarks:

Sub-contractors training seminar

Referring to research reports published in 1987, a seminar will be held (Kitabata will be in charge.) The participants will be those from parent companies, sub-contractors, economic organizations, and the department of industry.

3. Candidates for short term experts

Those engaging management training for small and medium scale industries as well as consulting jobs to them. They may be connected with Japanese Prefectural Government (Trading and manufacturing department), small and medium industries training agencies, and associations of small and medium scale industries.

JICA