

### **III CONSTRUCTION MATERIAL SURVEY**



## INTRODUCTION

This part of the investigation were aimed to find the suitable construction material (aggregate) near proposed site. To achieved the objective, about seven locations (two upstream and five downstream) have been investigated through test pit and collecting of bulk samples. The test pit were located along the course of the river where the material were identified as suitable and reasonable quantity. Bulk samples of sufficient quantity were collected from each test pit to carry out the following laboratory tests:-

<u>Item</u>	<u>Type of test</u>	<u>Standard of specification</u>
i)	Sieve Analysis of aggregates	ASTM C 136
ii)	Specific Gravity and Absorption of gravel	ASTM C 127
	Specific Gravity and Absorption of sand	ASTM C 128
iii)	Organic Impurities of sand	ASTM C 40
iv)	Scratch Hardness of soft particles in gravel	ASTM C 235
v)	Soundness of aggregates by use of Sodium Sulphate	ASTM C 88
vi)	Abrasion Test of gravel (using the Los Angeles machine)	ASTM C 131 & ASTM C 535 (JIS A1121)
vii)	Unit Weight test of aggregates	ASTM C 29
viii)	Compressive Strength of drilled core samples	ASTM D 2938

SUMMARY OF TEST PIT LOCATIONS & SAMPLING

(Mukoh)

Section B - Table 1

Sampling No.	Distance from the Dam Site (Km)	Volume of River deposit (m <sup>3</sup> )	Maximum Size of Particles (cm)	Sampling Weight (Kg)
TMK - 1	Down 15.0 Left Bank	600 (400)	10 - 20	90
TMK - 2	Down 22.0 Right Bank	2,000 (1,500)	10 - 20	180
TMK - 3	Down 25.0 Right Bank	1,200 (800)	10 - 20	180
TMK - 4	Down 27.0 Left Bank	1,500 (1,000)	10 - 20	90
TMK - 5	Down 32.0 Right Bank	1,500 (1,000)	10 - 20	90
TMK - 6	Up 2.5 Right Bank	3,000 (1,500)	30 - 50	180
TMK - 7 (Rock Samples for Quarry)	Left Bank of Dam Site			50
Total Volume		9,800 (6,200)		

Note 1 : ( ) Estimated Volume of Grain Size under 10cm.

Note 2 : Rock Type of TMK-1 to TMK-6 are Shale and Sandstone and TMK-7 is Sandstone.

SUMMARY OF LABORATORY TEST SCHEDULE

(Mukoh)

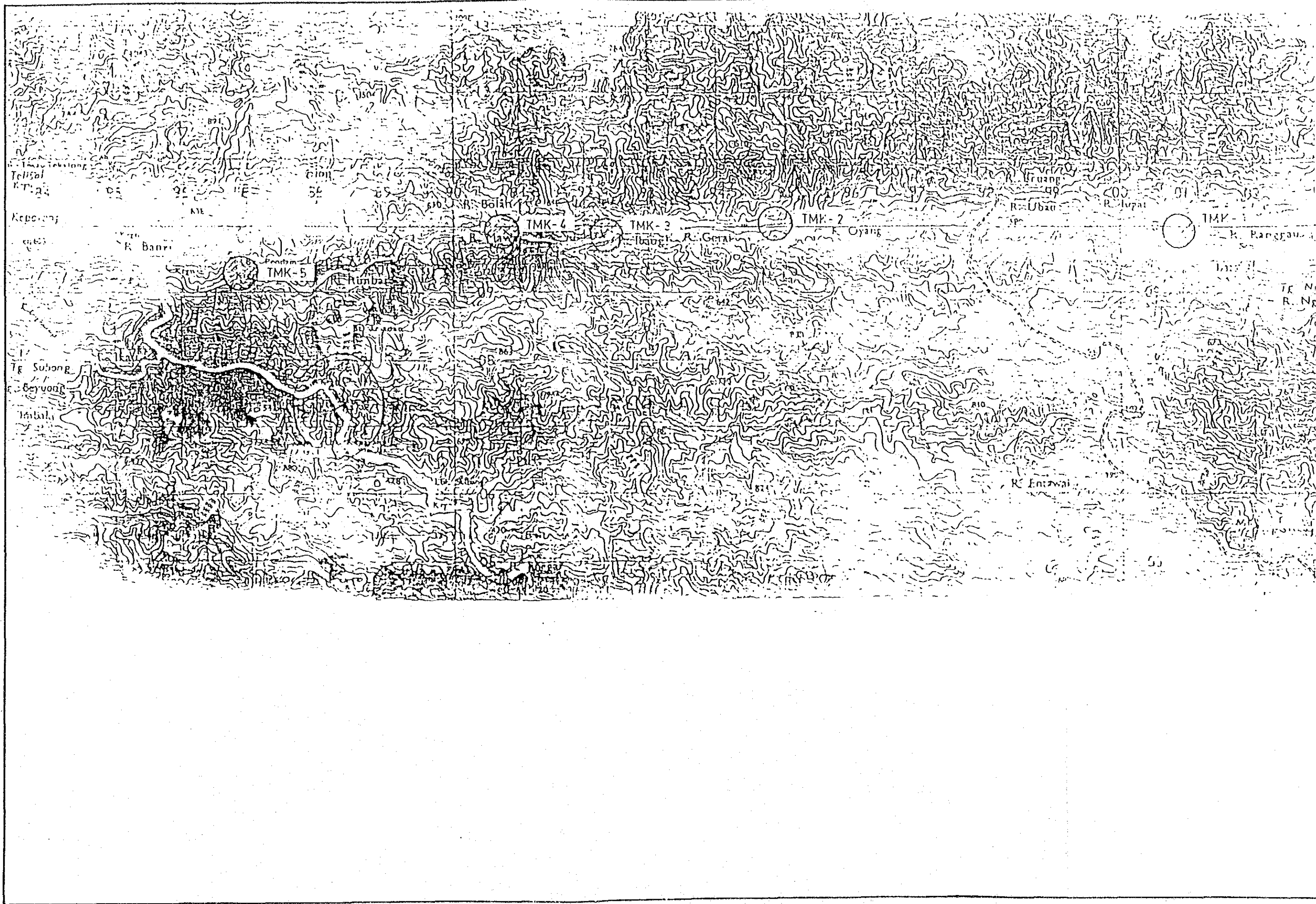
Section B - Table 2

Type of Test	Sieve Analysis		Specific gravity		Absorption		Organic Impurities	Scratch Hardness		Soundness		Abrasion (A+C+E)	Unit Weight	
	Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand	Gravel	Gravel	Sand	Gravel	
Sample No.	No. of Specimen Tested													
TMK - 1	2	2	2	2	2	2	2	2	-	-	-	2	2	
TMK - 2	2	2	2	2	2	2	2	2	1	1	A X 2 C X 2 E X 2	2	2	
TMK - 3	2	2	2	2	2	2	2	2	1	1	A X 2 C X 2 E X 2	2	2	
TMK - 4	2	2	2	2	2	2	2	2	-	-	-	-	-	
TMK - 5	2	2	2	2	2	2	2	2	-	-	-	-	-	
TMK - 6	2	2	2	2	2	2	2	2	1	1	A X 2 C X 2 E X 2	2	2	
TMK - 7 (Crushed Rock)	-	-	-	4	-	4	-	2	-	1	C X 2	-	-	
Drilled Core Sample No.	Test Condition													
	In-Situ		Saturated											
BMK-1A/5.55-5.75m	-		1											
BMK-1B/12.70-12.95m	-		1											
BMK-2A/10.70-10.95m	1		-											
BMK-2B/11.60-11.85m	1		-											



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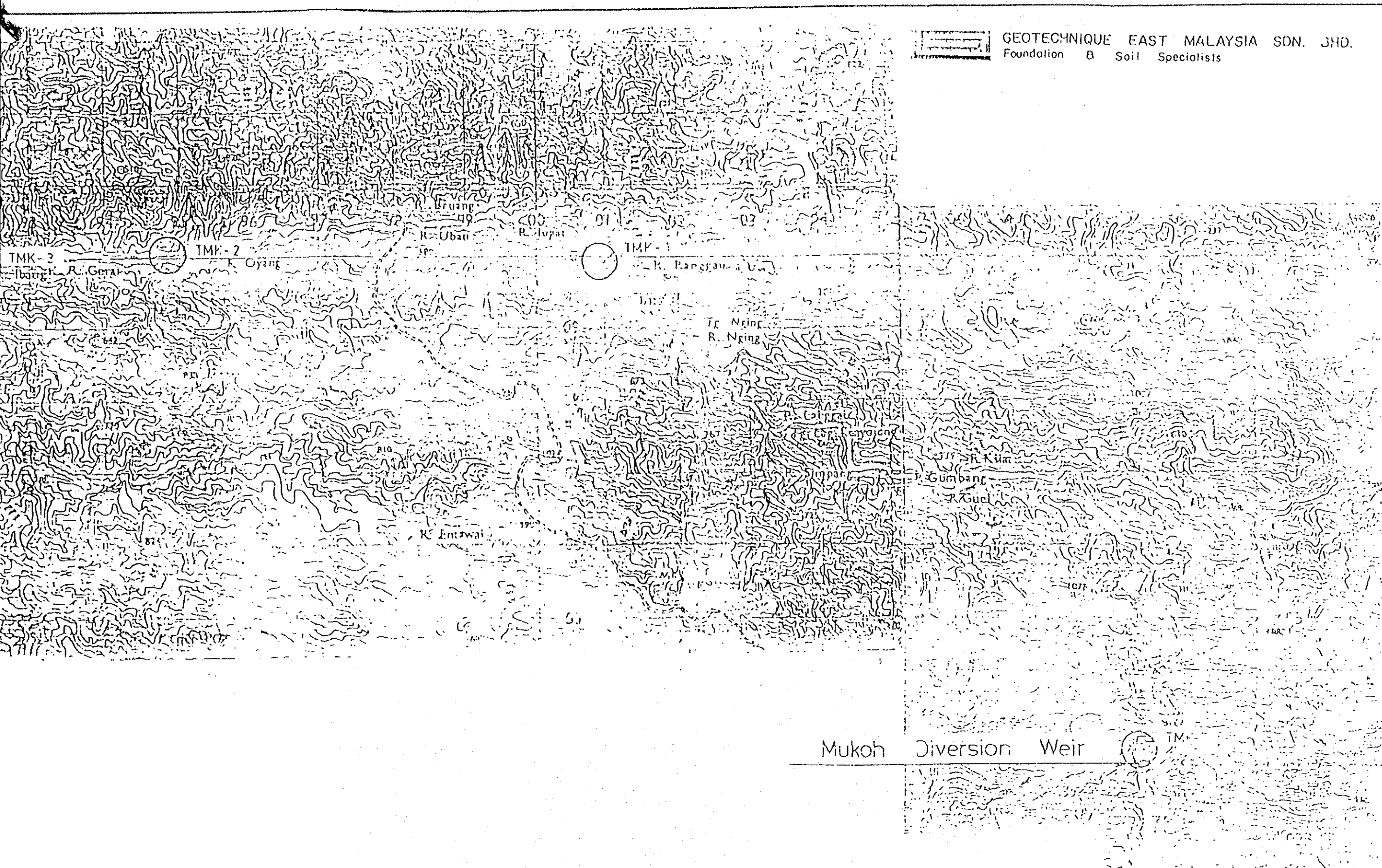


FIG.1 Location of Sampling for Laboratory Test

GOVERNMENT OF MALAYSIA  
FEASIBILITY STUDY  
SMALL SCALE HYDROELECTRIC POWER PROJECT IN SARAWAK  
JAPAN INTERNATIONAL COOPERATION AGENCY





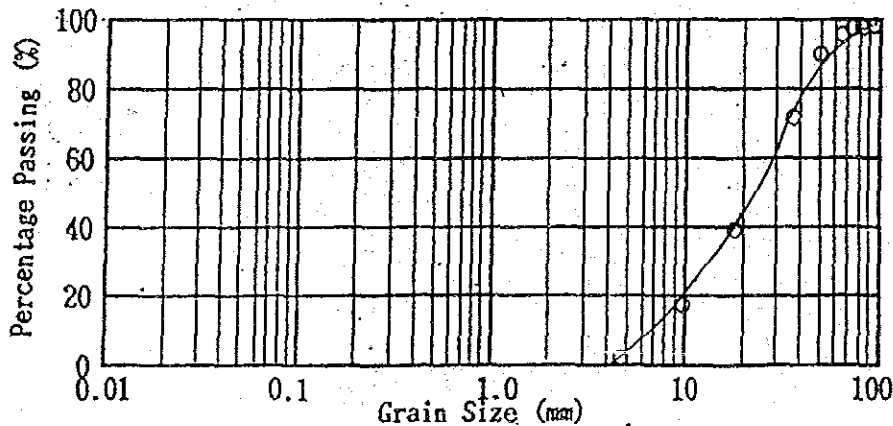


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
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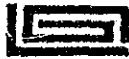
Name of Project Small Hydro Study For Mukoh Date 25.6.1987  
 Sample TMK-1 Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63	2,280	5	2,280	5	95
50	6,990	15	4,710	10	85
37.5	13,584	29	6,594	14	71
19.0	28,874	60	15,290	31	40
9.5	40,004	83	11,130	23	17
4.75	48,018	100	8,014	17	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	7.72				

Sieve Analysis Curve



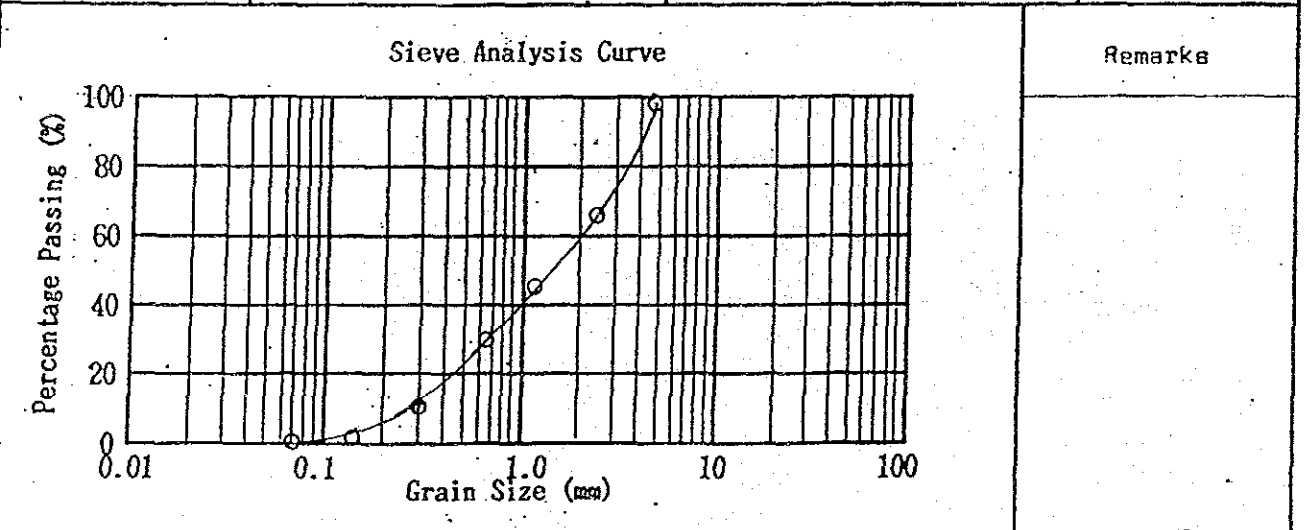
Remarks

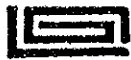


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>      FINE      </u> )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date <u>25.6.1987</u>
Sample	<u>TMK-1</u>	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					100
2.36	4,204	36	4,204	36	64
1.18	6,506	55	2,302	19	45
0.60	8,187	69	1,681	14	31
0.30	10,755	90	2,568	21	10
0.15	11,615	97	860	7	3
0.075	11,982	100	367	3	0
Total					

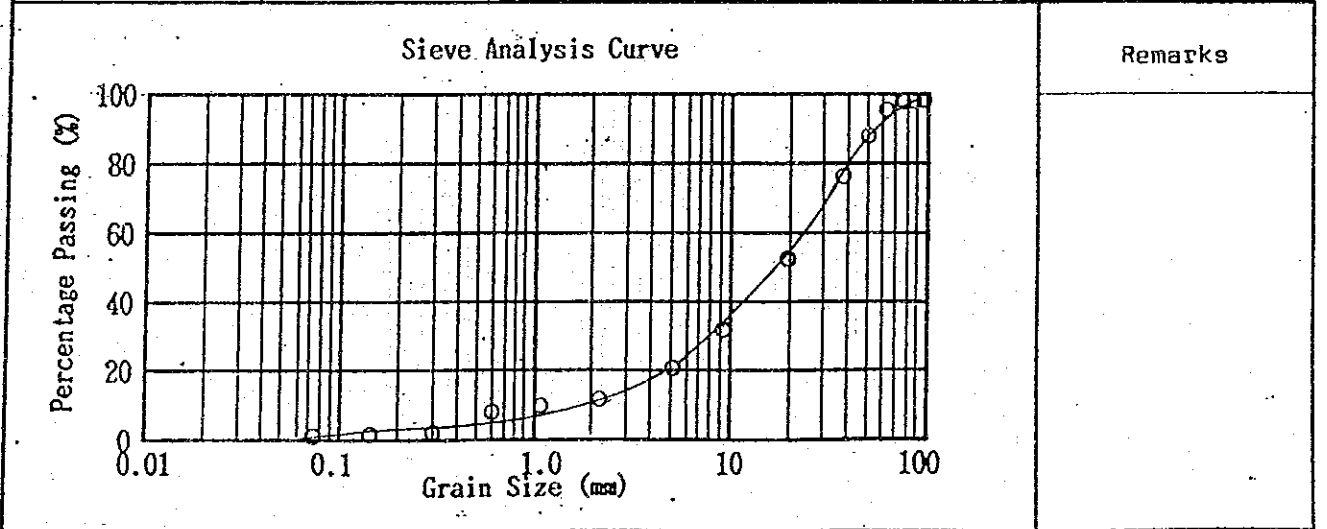
Fineness Modulu	3.47	
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Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE + FINE )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date 25.6.1987
Sample	TMM-1	Tested by C.S.M.

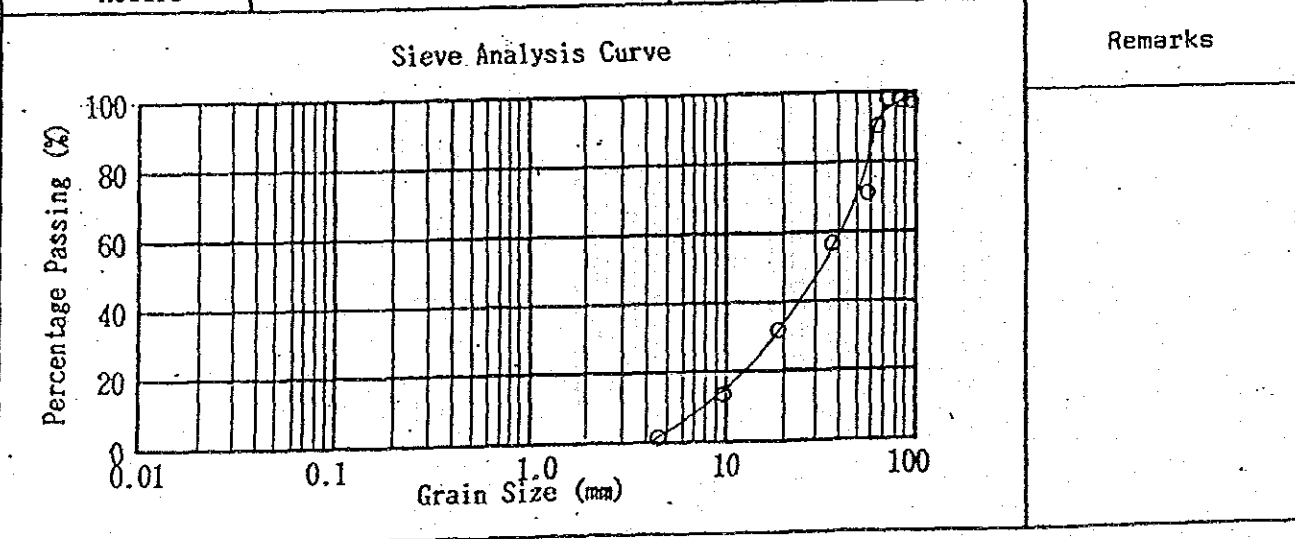
Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63	2,280	4	2,280	4	96
50	6,990	12	4,710	8	88
37.5	13,584	23	6,594	11	77
19.0	28,874	48	15,290	25	52
9.5	40,004	67	11,130	19	33
4.75	48,018	80	8,014	13	20
2.36	52,222	87	4,204	7	13
1.18	54,524	91	2,302	4	9
0.60	56,205	94	1,681	3	6
0.30	58,773	98	2,568	4	2
0.15	59,633	99	860	1	1
0.075	60,000	100	367	1	0
Total					
Fineness Modulu	6.87				





Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
Name of Project	Small Hydro. Study For Mukoh	Date <u>25.6.1987</u>
Sample	TMK-2	Tested by <u>C.S.M.</u>

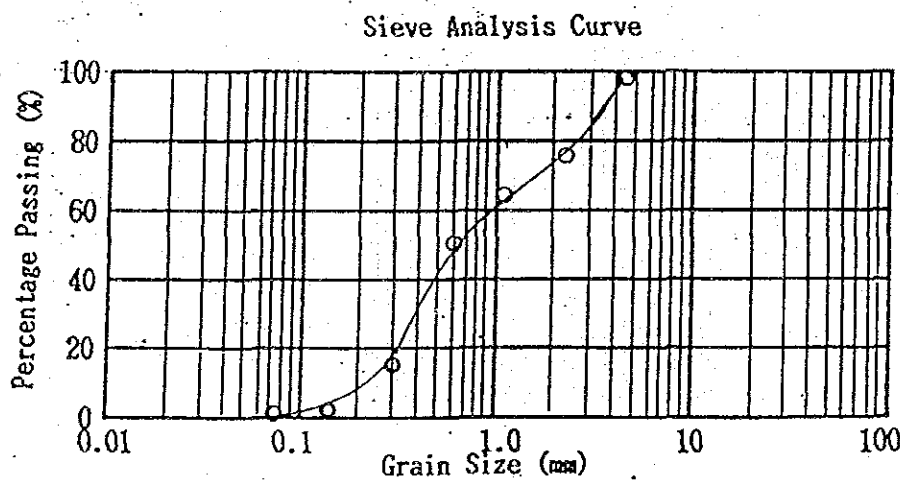
Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63	4,661	9	4,661	9	91
50	12,696	25	8,035	16	75
37.5	20,501	41	7,805	16	59
19.0	34,586	68	14,085	27	32
9.5	43,416	86	8,830	18	14
4.75	50,283	100	6,867	14	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	7.95				





Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>      FINE      </u> )	ASTM C 136
Name of Project	<u>Small Hydro Study For Mukoh</u>	Date <u>25.6.1987</u>
Sample	<u>TMK-2</u>	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					100
2.36	2,187	23	2,187	23	77
1.18	3,652	38	1,465	15	62
0.60	4,825	50	1,173	12	50
0.30	8,479	87	3,654	37	13
0.15	9,412	97	933	10	3
0.075	9,717	100	305	3	0
Total					
Fineness Modulu	2.95				

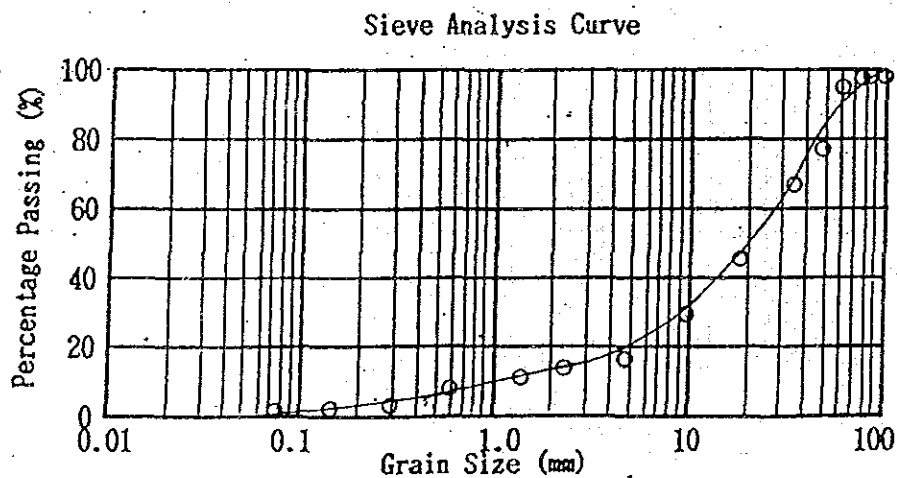


Remarks



Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE + FINE )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date 25.6.1987
Sample	TMK-2	Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63	4,661	8	4,661	8	92
50	12,696	21	8,035	13	79
37.5	20,501	34	7,805	13	66
19.0	34,586	57	14,085	23	43
9.5	43,416	72	8,830	15	28
4.75	50,283	83	6,867	11	17
2.36	52,470	87	2,187	4	13
1.18	53,935	89	1,465	2	11
0.60	55,108	91	1,173	2	9
0.30	58,762	97	3,654	6	3
0.15	59,695	99	933	2	1
0.075	60,000	100	305	1	0
Total					
Fineness Modulu	7.09		1		



Remarks

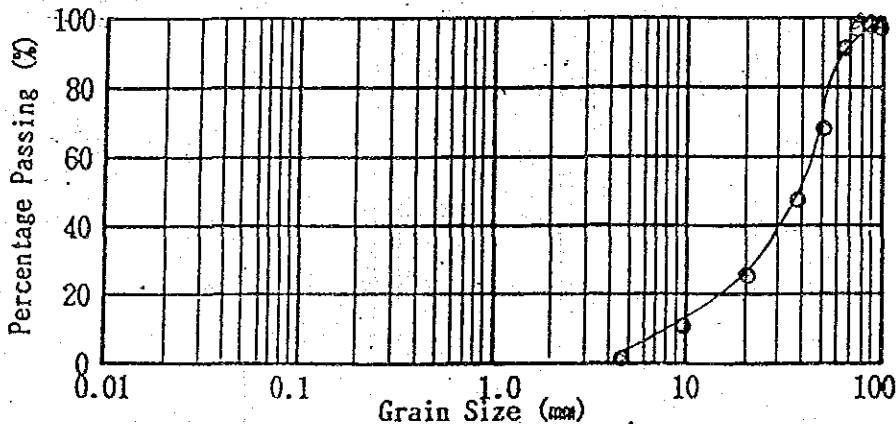


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
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Name of Project Small Hydro Study For Mukoh Date 25-6-1987  
 Sample TMK-3 Tested by C.S.M.

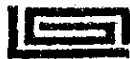
Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					100
63	2,029	5	2,029	5	95
50	13,918	31	11,889	26	69
37.5	23,649	53	9,731	22	47
19.0	33,352	75	9,703	22	25
9.5	39,632	89	6,280	14	11
4.75	44,549	100	4,917	11	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	8.17				

Sieve Analysis Curve



Remarks





Name of Test	SIEVE ANALYSIS OF AGGREGATES ( FINE )	ASTM C 136
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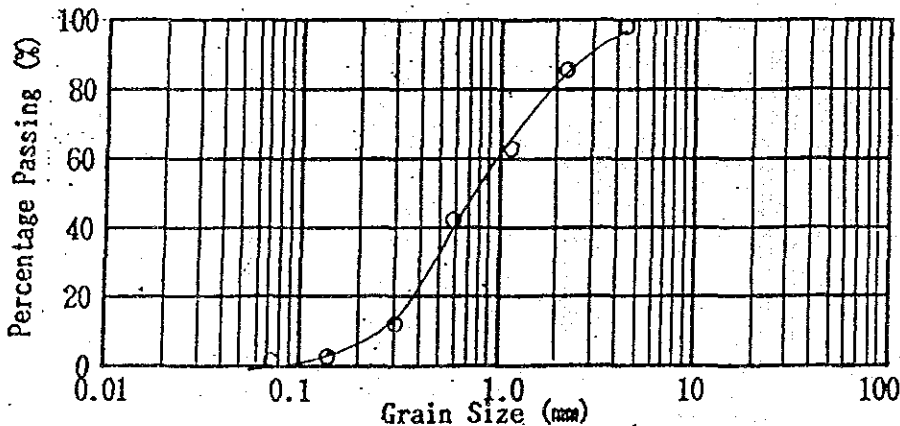
Name of Project Small Hydro Study For Mukoh Date 25.6.1987  
 Sample TMK-3 Tested by G.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					100
2.36	2,166	16	2,166	16	84
1.18	5,270	38	3,104	22	62
0.60	7,874	57	2,604	19	43
0.30	12,162	88	4,288	31	12
0.15	13,603	98	1,441	10	2
0.075	13,821	100	218	2	0
Total					

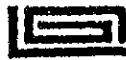
Fineness Modulu

2.97

Sieve Analysis Curve



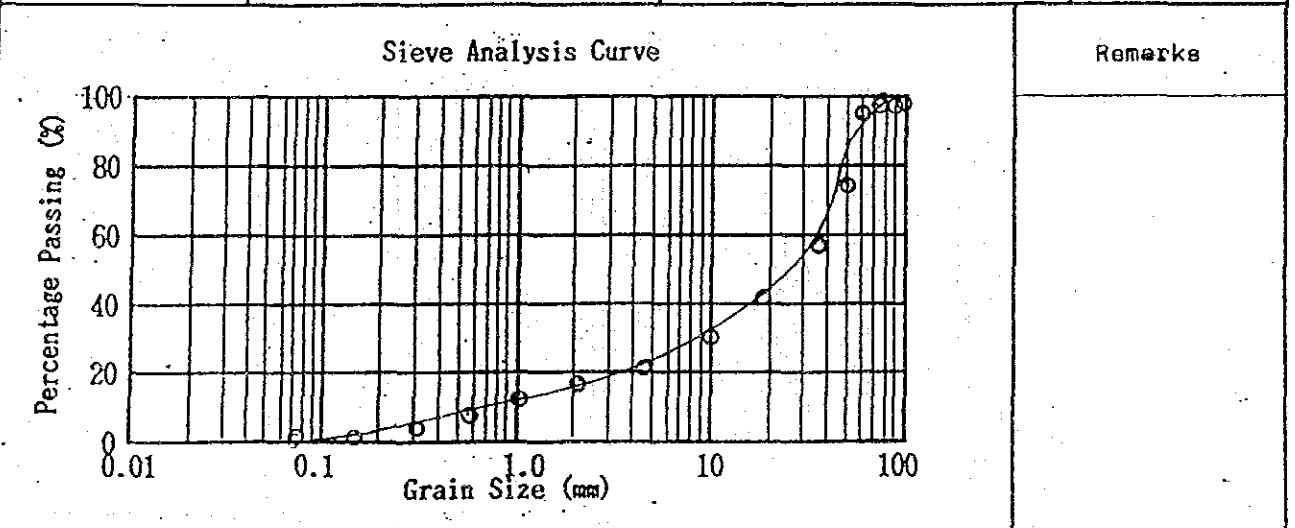
Remarks



Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE + FINE )	ASTM C 136
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Name of Project	Small Hydro Study For Mukoh	Date	25-6-1987
Sample	TMK-3	Tested by	C.S.M.

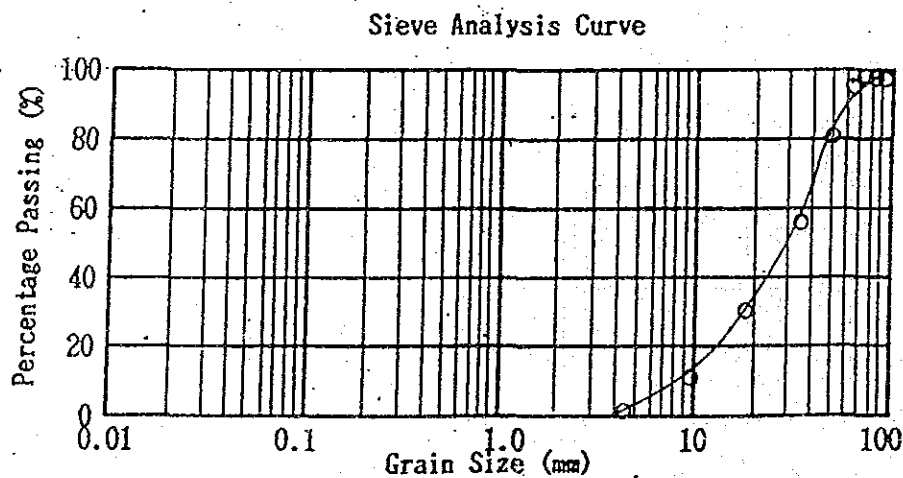
Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					100
63	2,029	3	2,029	3	97
50	13,918	25	11,889	22	75
37.5	23,649	42	9,731	17	58
19.0	33,352	59	9,703	17	41
9.5	39,632	70	6,380	11	30
4.75	44,549	78	4,917	8	22
2.36	46,715	82	2,166	4	18
1.18	49,819	87	3,104	5	13
0.60	52,423	91	2,604	4	9
0.30	56,711	98	4,288	7	2
0.15	58,152	100	1,441	2	0
0.075	58,370	100	218	0	0
Total					
Fineness Modulu	7.07				





Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
Name of Project	Small Hydro. Study For Mukoh	Date <u>25.6.1987</u>
Sample	TMK-4	Tested by <u>G.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					100
63	2,174	5	2,174	5	95
50	9,420	20	7,246	15	80
37.5	19,540	42	10,120	22	58
19.0	31,976	69	12,436	27	31
9.5	40,048	86	8,072	17	14
4.75	46,793	100	6,745	14	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	7.97				



Remarks



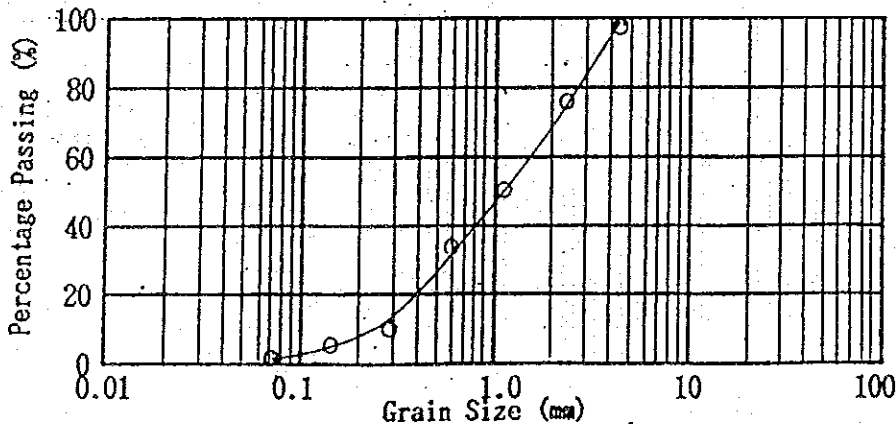
Name of Test	SIEVE ANALYSIS OF AGGREGATES ( FINE )	ASTM C 136
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Name of Project Small Hydro Study For Mukoh Date 25.6.1987  
 Sample TMK-4 Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					100
2.36	3,159	24	3,159	24	76
1.18	6,561	50	3,402	26	50
0.60	8,755	66	2,194	16	34
0.30	12,007	90	3,252	24	10
0.15	12,872	96	865	6	4
0.075	13,407	100	535	4	0
Total					

Fineness Modulu 3.26

Sieve Analysis Curve



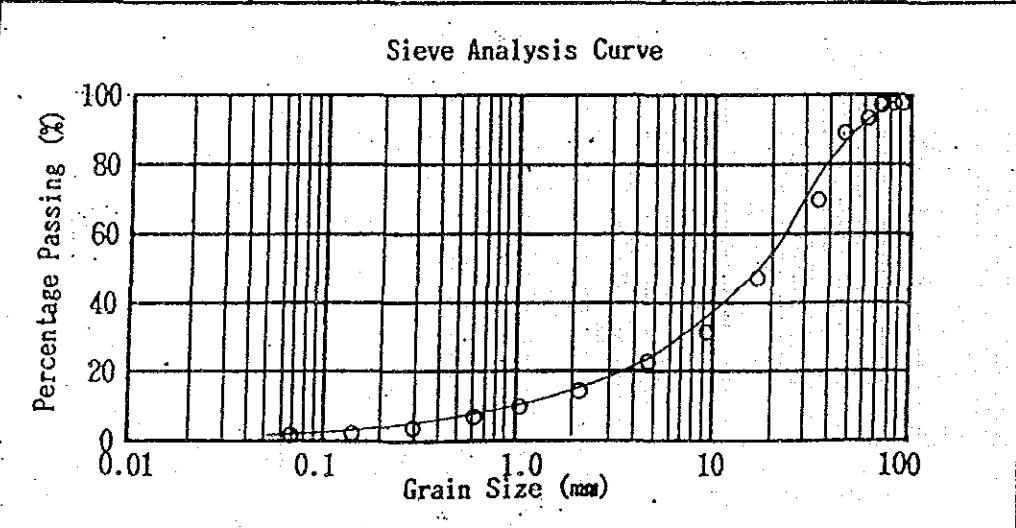
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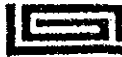
Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE + FINE )	ASTM C 136
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Name of Project	Small Hydro Study For Mukoh	Date	25.6.1987
Sample	TMH-4	Tested by	E.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63	2,174	4	2,174	4	96
50	9,420	16	7,246	12	84
37.5	19,540	33	10,120	17	67
19.0	31,976	54	12,436	21	46
9.5	40,048	68	8,072	14	32
4.75	46,793	79	6,745	11	21
2.36	48,952	83	2,159	4	17
1.18	52,354	89	3,402	6	11
0.60	54,548	93	2,194	4	7
0.30	57,800	98	3,252	5	2
0.15	58,665	99	865	1	1
0.075	59,200	100	535	1	0
Total					
Fineness Modulu	6.96				



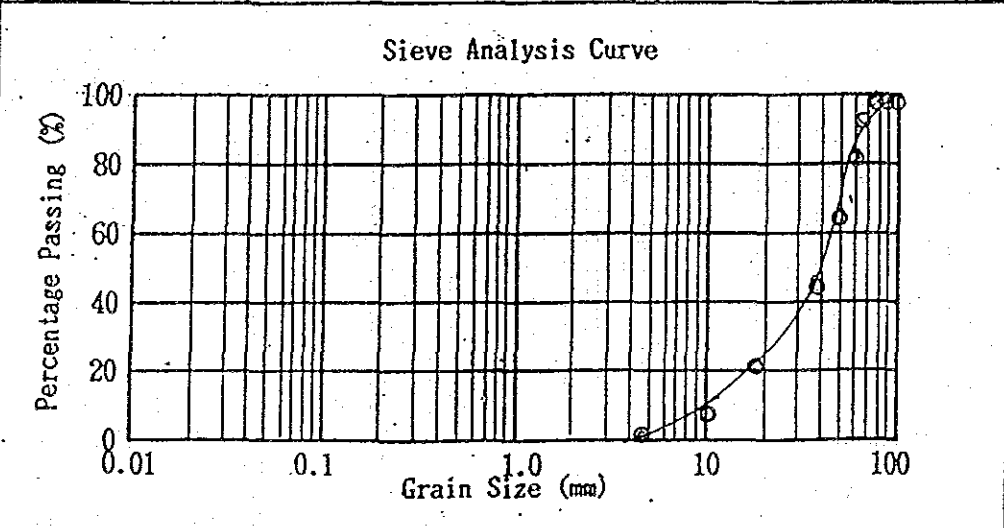
Remarks



Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
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Name of Project <u>Small Hydro Study For Mukoh</u>	Date <u>25-6-1987</u>
Sample <u>TMK-5</u>	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					100
63	6,135	13	6,135	13	87
50	14,475	31	8,340	18	69
37.5	22,675	49	8,200	18	51
19.0	36,617	79	13,942	30	21
9.5	43,391	93	6,774	14	7
4.75	46,603	100	3,412	7	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	8.21				



Remarks:



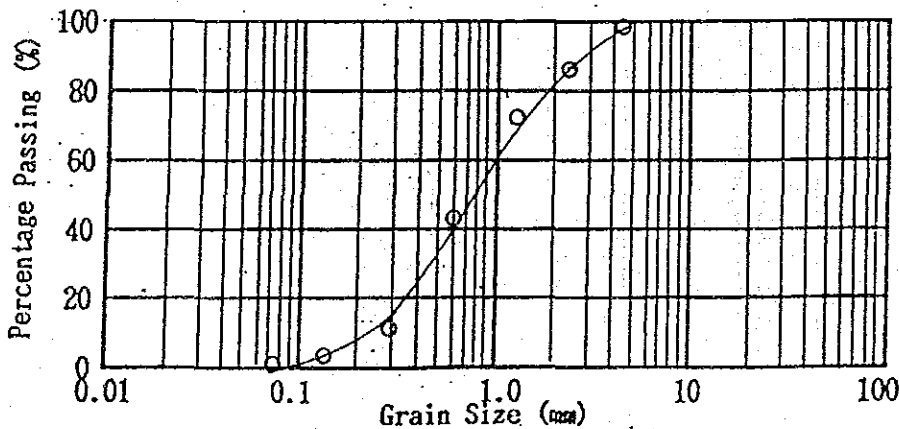
Name of Test	SIEVE ANALYSIS OF AGGREGATES ( FINE )	ASTM C 136
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Name of Project Small Hydro Study For Mukoh Date 25.6.1987

Sample TMK-5 Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					100
2.36	1,271	12	1,271	12	88
1.18	2,913	27	1,642	15	73
0.60	6,027	56	3,114	29	44
0.30	9,757	92	3,730	36	8
0.15	10,362	98	605	6	2
0.075	10,617	100	255	2	0
Total					
Fineness Modulu	2.85				

Sieve Analysis Curve



Remarks



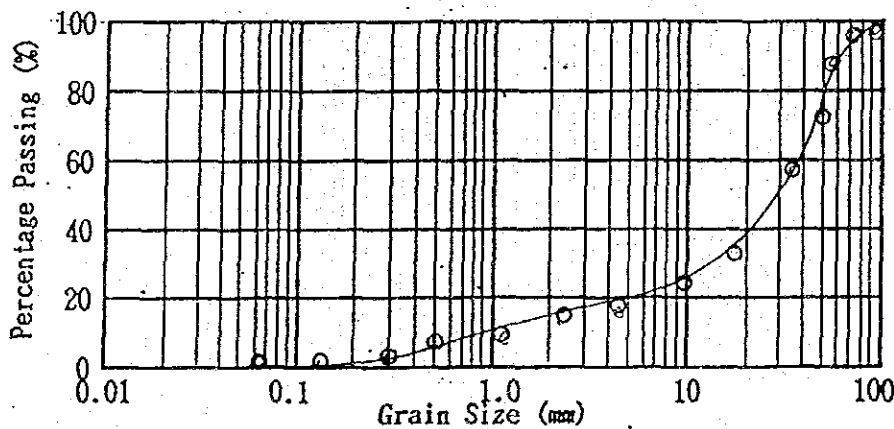
Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE + FINE )	ASTM C 136
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Name of Project Small Hydro Study For Mukoh Date 26-6-1987

Sample TMK-5 Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					100
63	6,135	11	6,135	11	89
50	14,475	26	8,340	15	74
37.5	22,675	40	8,200	14	60
19.0	36,617	65	13,942	25	35
9.5	43,391	77	6,774	12	23
4.75	46,803	83	3,412	6	17
2.36	48,074	85	1,271	2	15
1.18	49,716	88	1,642	3	12
0.60	52,630	93	3,114	5	7
0.30	56,560	99	3,730	6	1
0.15	57,165	100	605	1	0
0.075	57,420	100	225	0	0
Total					
Fineness Modulu	7.30				

Sieve Analysis Curve



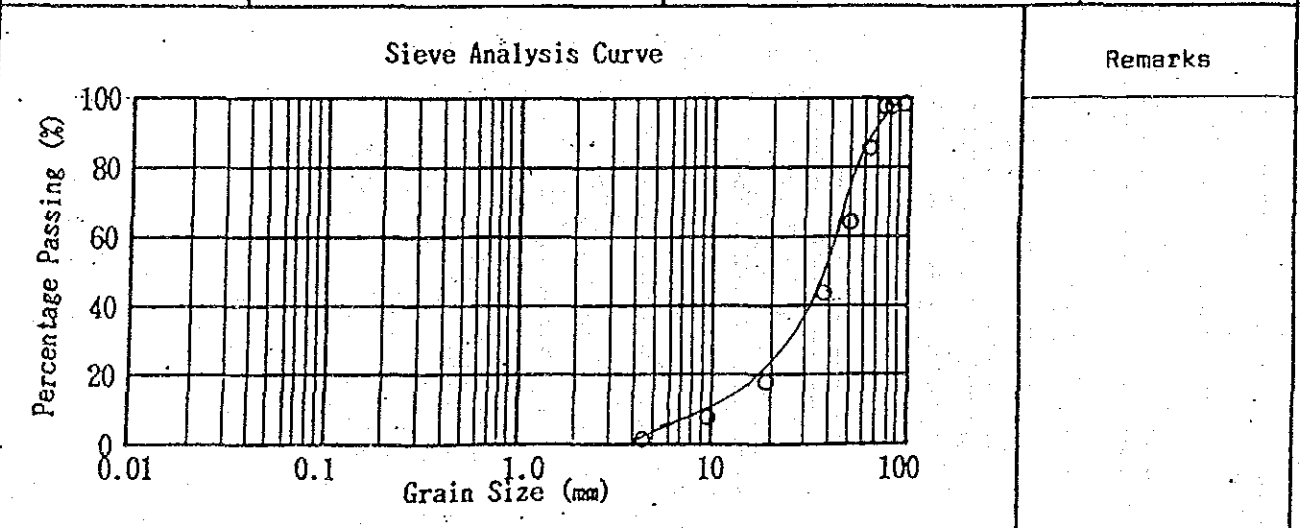
Remarks

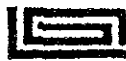




Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date <u>8.7.1987</u>
Sample	TMK-6	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63	7,394	15	7,394	15	85
50	17,622	35	10,228	20	65
37.5	28,326	56	10,704	21	44
19.0	40,358	81	12,032	25	19
9.5	45,960	92	5,602	11	8
4.75	50,129	100	4,169	8	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	8.29				





Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>FINE</u> )	ASTM C 136
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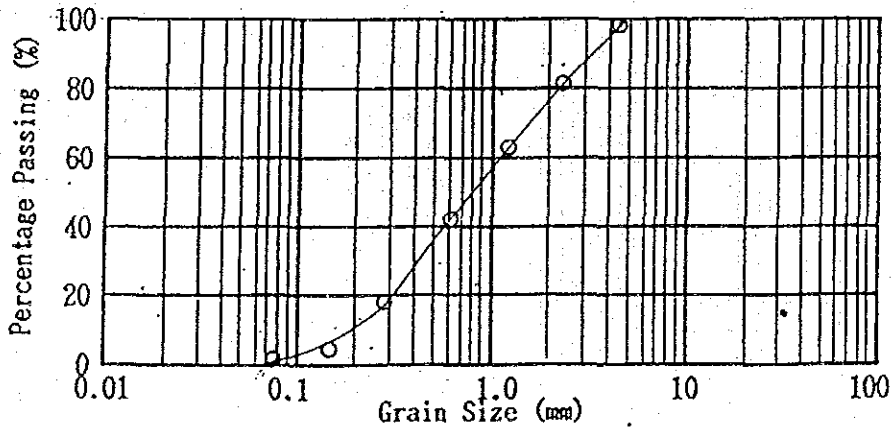
Name of Project Small Hydro Study For Mukoh Date 8.7.1987

Sample TMK-6 Tested by G.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75	-	-	-	-	100
2.36	2,132	21	2,132	21	79
1.18	3,866	38	1,734	17	62
0.60	5,883	58	2,017	20	42
0.30	8,217	82	2,334	24	18
0.15	9,575	96	1,358	14	4
0.075	9,971	100	396	4	0
Total					

Fineness Modulu 2.95

Sieve Analysis Curve



Remarks



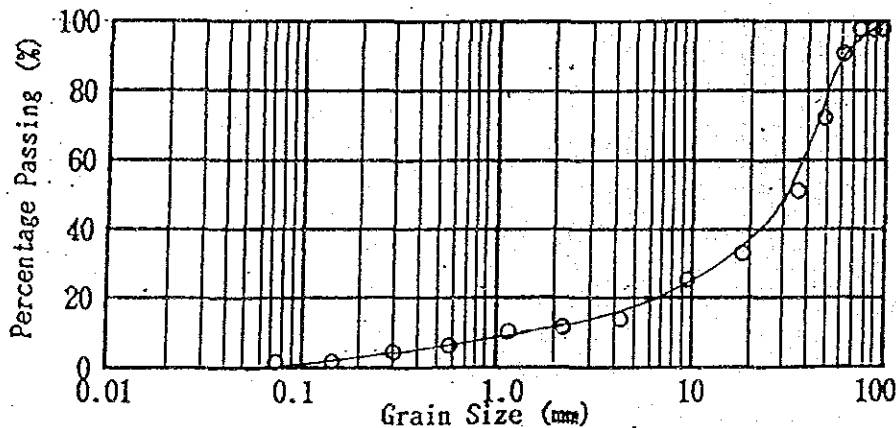
Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE+FINE )	ASTM C 136
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Name of Project Small Hydro Study For Mukoh Date 8.7.1987

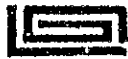
Sample TMK-6 Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63	7,394	12	7,394	12	88
50	17,622	29	10,228	17	71
37.5	28,326	47	10,704	18	53
19.0	40,358	67	12,032	20	33
9.5	45,960	76	5,602	9	24
4.75	50,129	83	4,169	7	17
2.36	52,261	87	2,132	4	13
1.18	53,895	90	1,634	3	10
0.60	55,912	93	2,017	3	7
0.30	58,246	97	2,334	4	3
0.15	59,604	99	1,358	2	1
0.075	60,000	100	396	1	0
Total					
Fineness Modulu	7.39				

Sieve Analysis Curve



Remarks

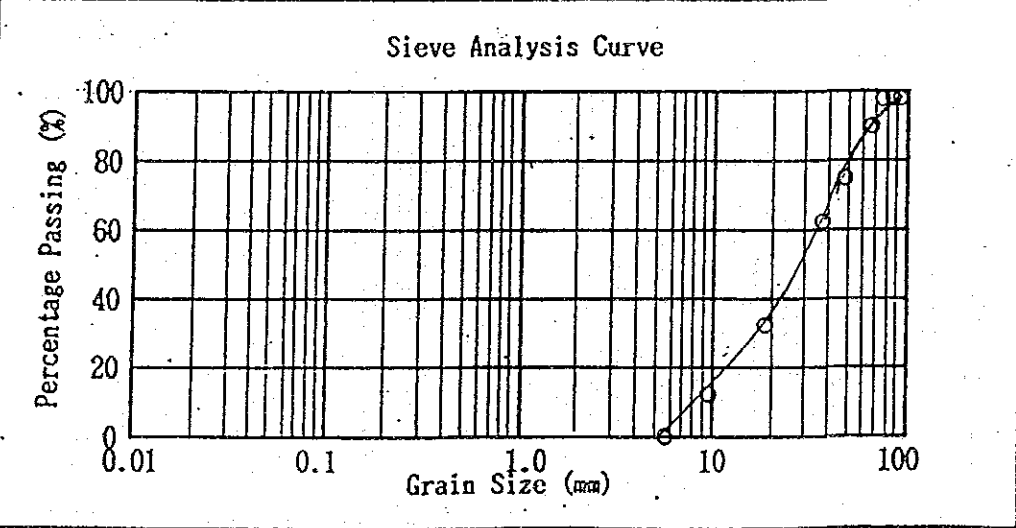


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
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Name of Project Small Hydro Study For Mukoh Date 25.6.1987

Sample TMK-1/Test 1 Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100	-	-	-	-	-
90	-	-	-	-	-
75	-	-	-	-	-
63	2,280	10	2,280	10	90
50	5,760	25	3,480	15	75
37.5	8,410	36	2,650	11	64
19.0	14,880	64	6,470	28	36
9.5	20,470	88	5,590	24	12
4.75	23,157	100	2,687	12	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	7.88				



Remarks

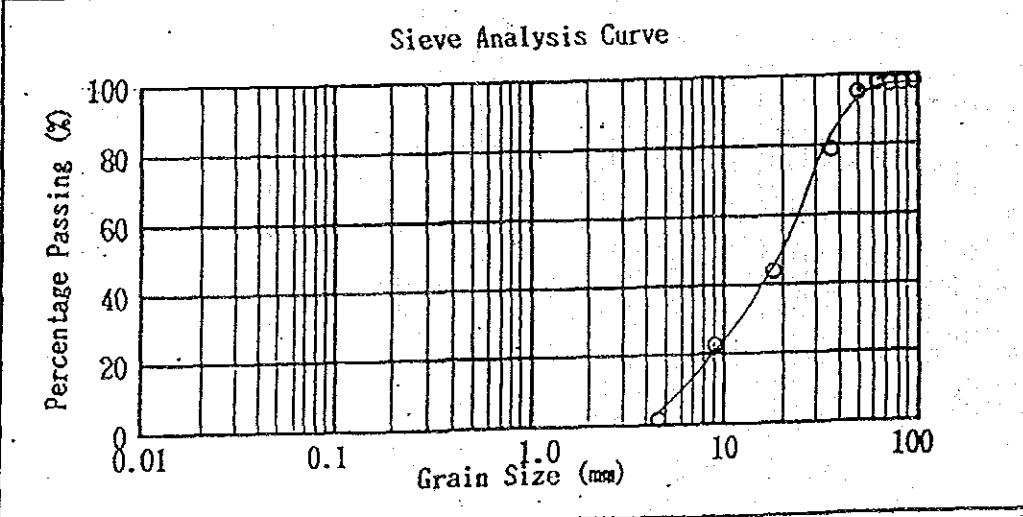


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
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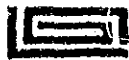
Name of Project <u>Small Hydro Study For Mukoh</u>	Date <u>25.6.1987</u>
Sample <u>TMK-1/Test 2</u>	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100	-	-	-	-	-
90	-	-	-	-	-
75	-	-	-	-	-
63	-	-	-	-	-
50	1,230	5	1,230	5	95
37.5	5,174	21	3,944	16	79
19.0	13,994	57	8,820	36	43
9.5	19,534	79	5,540	22	21
4.75	24,861	100	5,327	21	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					

Fineness Modulu	7.57
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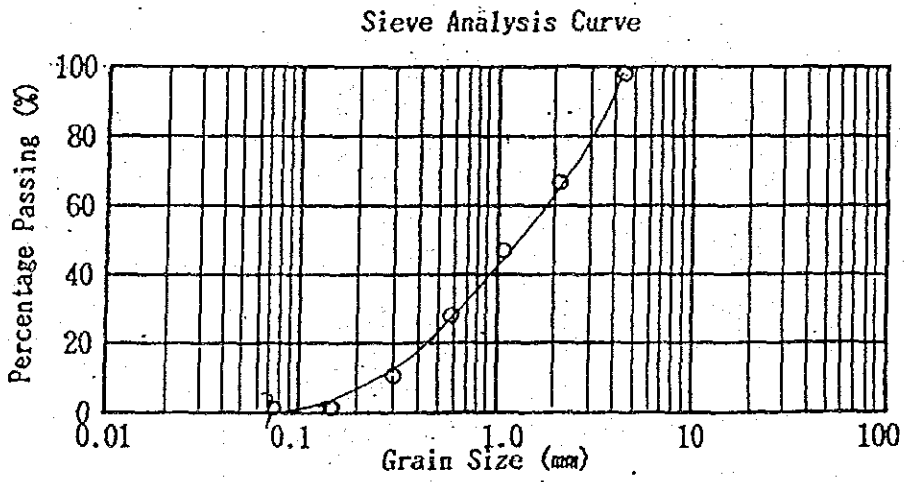


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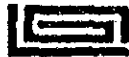


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>FINE</u> )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date <u>25.6.1987</u>
Sample	TMK-1/Test 1	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					
2.36	2,383	34	2,383	34	66
1.18	3,670	53	1,287	19	47
0.60	4,995	72	1,325	19	28
0.30	6,129	89	1,134	17	11
0.15	6,644	97	515	8	3
0.075	6,843	100	199	3	0
Total					
Fineness Modulu	3.45				



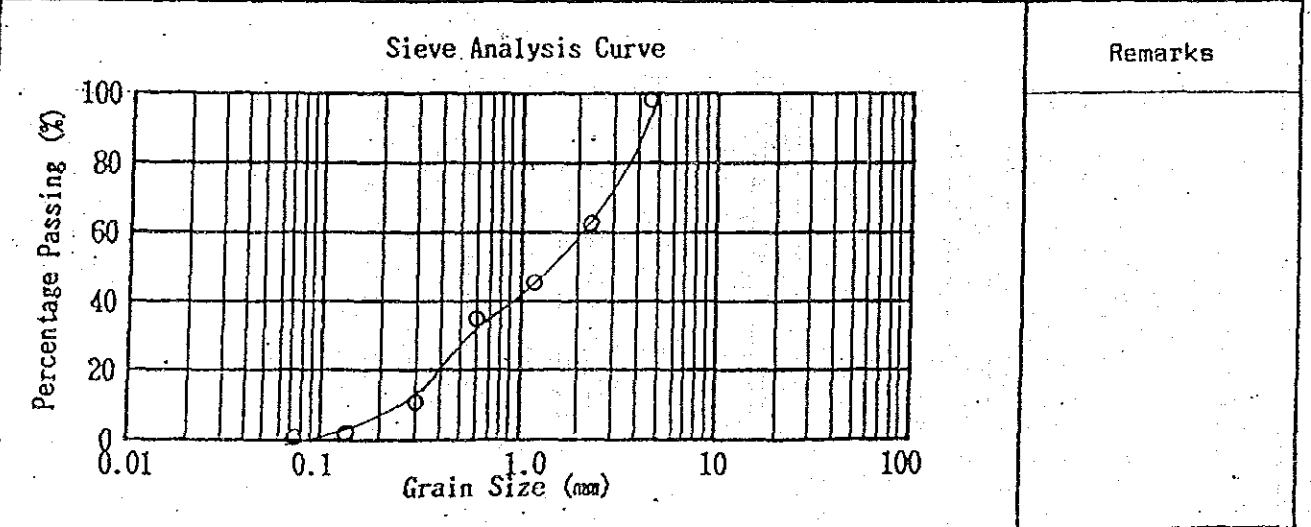
Remarks



Name of Test	SIEVE ANALYSIS OF AGGREGATES ( FINE )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date 25.6.1987
Sample	TMK-1/Test 2	Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					
2.36	1,821	35	1,821	35	65
1.18	2,836	55	1,015	20	45
0.60	3,192	62	356	7	38
0.30	4,626	90	1,434	28	10
0.15	4,971	97	345	7	3
0.075	5,139	100	168	3	0
Total					

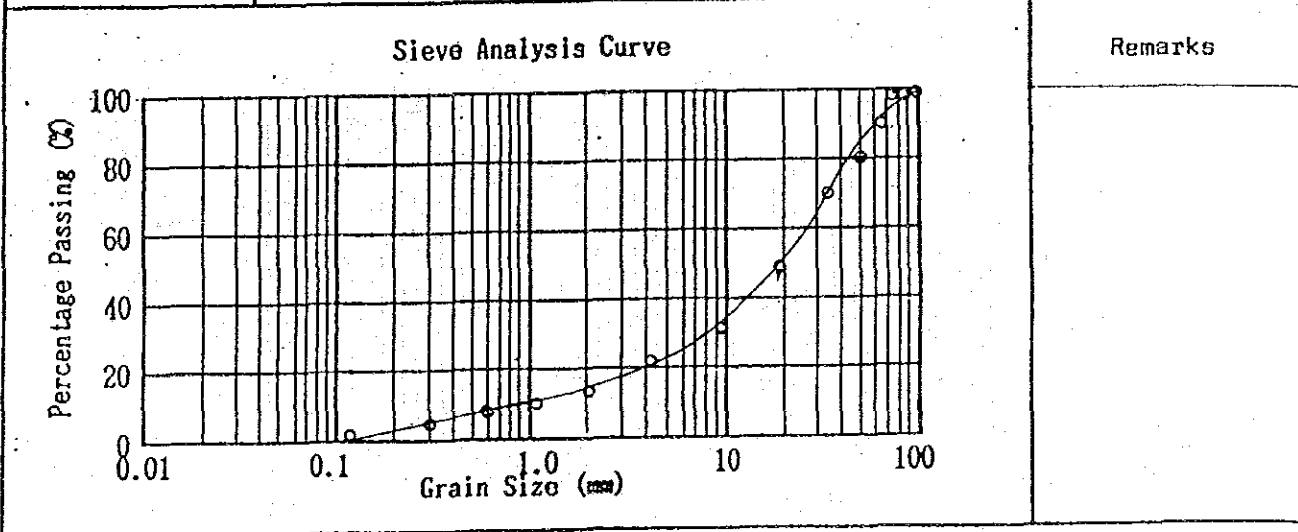
Fineness Modulu	3.39	
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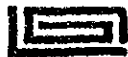


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE + FINE )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date 25.6.1987
Sample	TMK-1/Test 1	Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100	-	-	-	-	-
90	-	-	-	-	-
75	-	-	-	-	-
63	2280	8	2280	8	92
50	5760	20	3480	12	80
37.5	8410	29	2650	9	71
19.0	14880	51	6470	22	49
9.5	20470	70	5590	19	30
4.75	23157	78	2687	8	22
2.36	25540	85	2383	7	15
1.18	26827	89	1287	4	11
0.60	28152	93	1325	4	7
0.30	29286	97	1134	4	3
0.15	29801	99	515	2	1
	30000	100	199	1	0
Total			30,000		
Fineness Modulu	6.91				

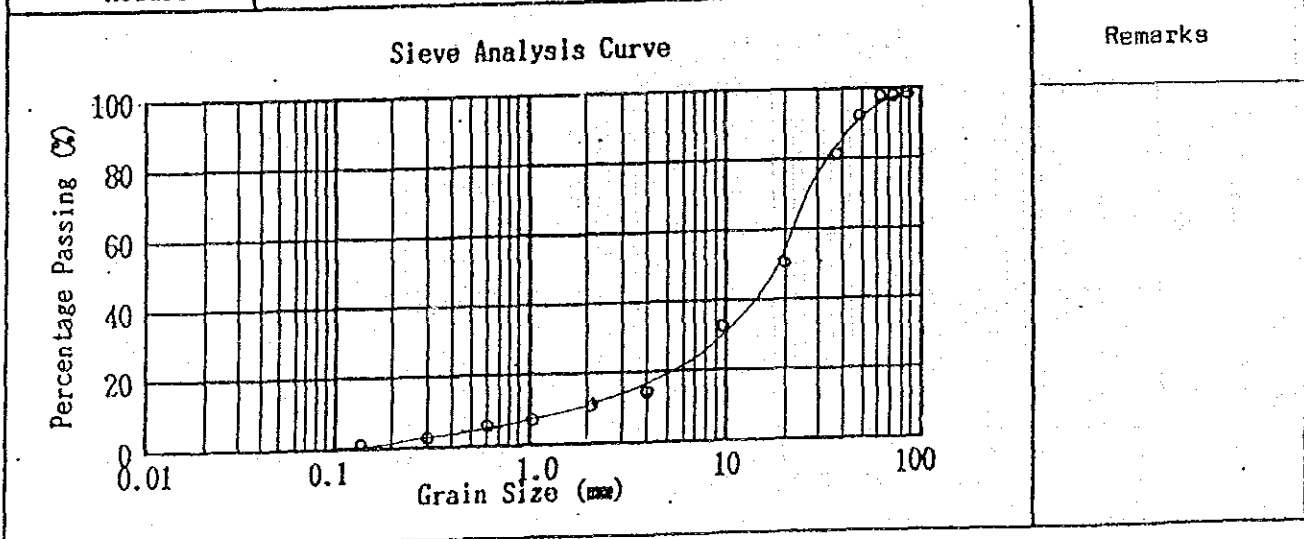


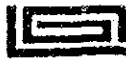




Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE + FINE )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date 25.6.1987
Sample	TMK-1/Test 2	Tested by C.S.M.

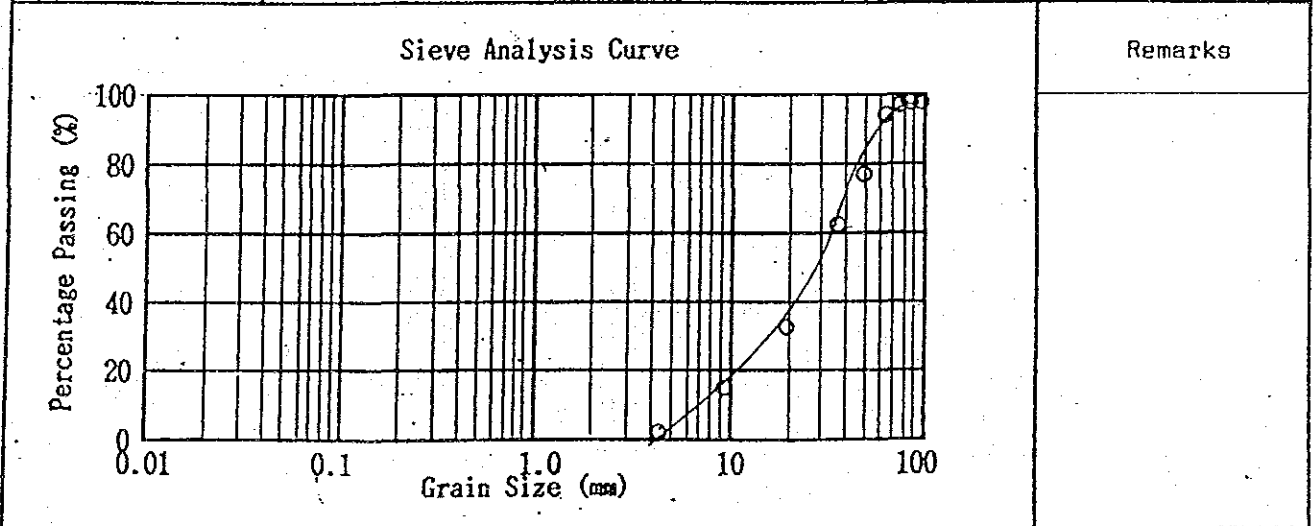
Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100	-	-	-	-	-
90	-	-	-	-	-
75	-	-	-	-	-
63	-	-	-	-	-
50	1230	4	1230	4	96
37.5	5174	18	3944	14	82
19.0	13,994	47	8820	29	53
9.5	19,530	65	5540	18	35
4.75	24,861	83	5327	18	17
2.36	26,682	89	1821	6	11
1.18	27,697	92	1015	3	8
0.60	28,053	93	356	1	7
0.30	29,487	98	1434	5	2
0.15	29,832	99	345	1	1
	30,000	100	168	1	0
Total					
Fineness Modulu	6.84				





Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date <u>25.6.1987</u>
Sample	TMK-2/Test 1	Tested by <u>E.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100	-	-	-	-	-
90	-	-	-	-	-
75	-	-	-	-	-
63	1,118	4	1,118	4	96
50	6,408	25	5,290	21	75
37.5	9,831	38	3,423	13	62
19.0	16,861	66	7,030	28	34
9.5	21,376	84	4,515	18	16
4.75	25,537	100	4,161	16	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	7.88				

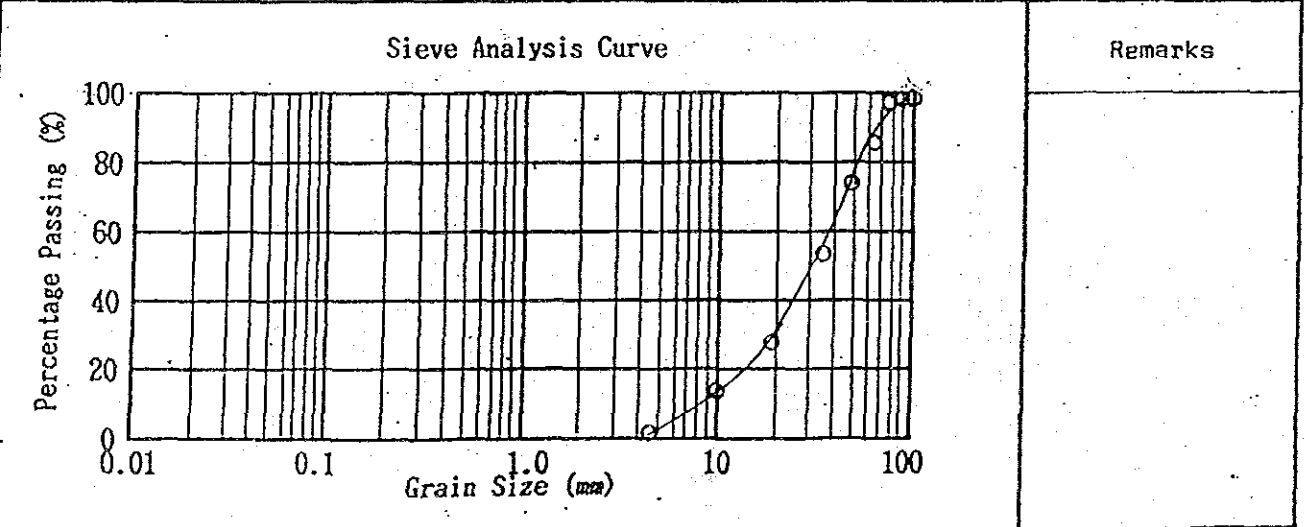




Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date <u>25.6.1987</u>
Sample	TMK-2/Test 2	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90			-		
75			-		
63	3,543	14	3,543	14	86
50	6,288	25	2,745	11	75
37.5	10,670	43	4,382	18	57
19.0	17,725	72	7,055	29	28
9.5	22,040	89	4,315	17	11
4.75	24,746	100	2,706	11	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					

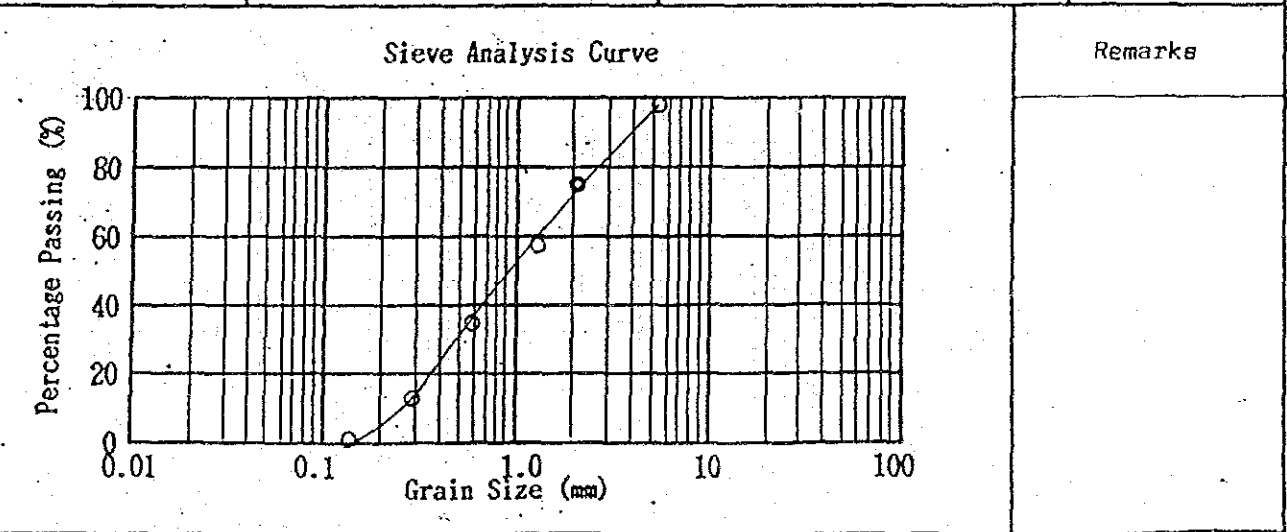
Fineness Modulu	8.04	
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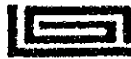




Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u> FINE</u> )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date <u> 25.6.1987</u>
Sample	TMK-2/Test 1	Tested by <u> C.S.M.</u>

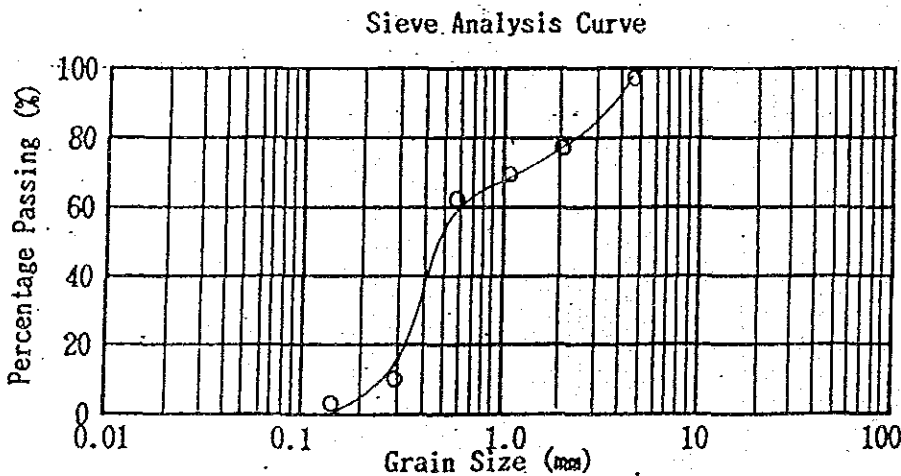
Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75			4,161		
2.36	1,078	24	1,078	24	76
1.18	2,002	45	924	21	55
0.60	2,791	63	789	18	37
0.30	3,906	87	1,115	24	13
0.15	4,385	98	479	11	2
0.075	4,463	100	78	2	0
Total					
Fineness Modulu	3.17				



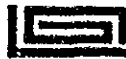


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>    FINE    </u> )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date <u>    25.6.1987    </u>
Sample	TMM-2/Test 2	Tested by <u>    C.S.M.    </u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					
2.36	1,109	21	1,109	21	79
1.18	1,650	31	541	10	69
0.60	2,034	38	384	7	62
0.30	4,573	87	2,539	49	13
0.15	5,027	96	454	9	4
0.075	5,254	100	227	4	0
Total					
Fineness Modulu	2.73				

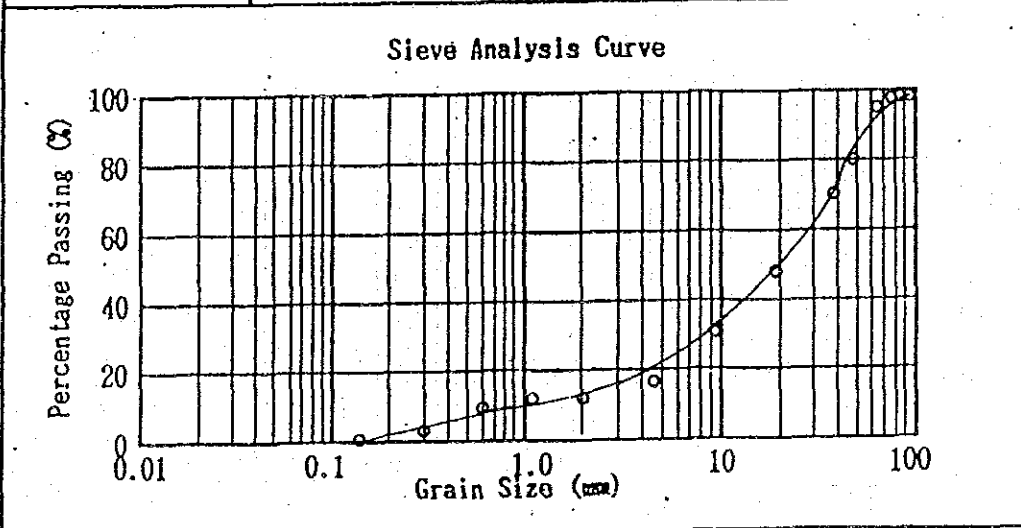


Remarks



<b>Name of Test</b>	<b>SIEVE ANALYSIS OF AGGREGATES ( COARSE + FINE )</b>	<b>ASTM C 136</b>
<b>Name of Project</b>	Small Hydro Study For Mukoh	<b>Date</b> 25.6.1987
<b>Sample</b>	TMK-2/Test 1	<b>Tested by</b> C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100	-	-	-	-	-
90	-	-	-	-	-
75	-	-	-	-	-
63	1118	3	1118	3	97
50	6408	20	5290	17	80
37.5	9831	31	3423	11	69
19.0	16,861	54	7030	23	46
9.5	21,376	69	4515	15	31
4.75	25,537	82	4161	13	18
2.36	26,615	86	1078	4	14
1.18	27,539	89	924	3	11
0.60	28,328	92	789	3	8
0.30	29,443	96	1115	4	4
0.15	29,922	98	479	2	2
	30,000	100	78	2	0
<b>Total</b>					
<b>Fineness Modulu</b>	6.97				

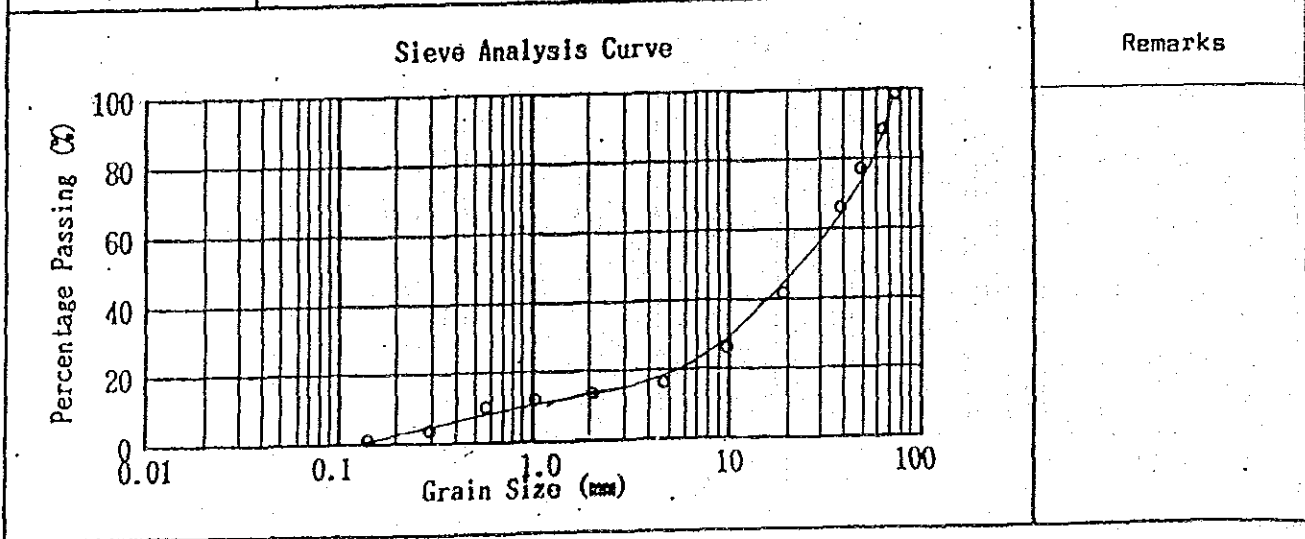


**Remarks**



Name of Test	SIEVE ANALYSIS OF AGGREGATES (COARSE + FINE )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date 25.6.1987
Sample	TMK-2/Test 2	Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100			-		
90			-		
75			-		
63	3543	12	3543	12	88
50	6288	21	2745	9	79
37.5	10670	35	4382	14	65
19.0	17725	59	7055	24	41
9.5	22040	74	4315	15	26
4.75	24746	83	2706	9	17
2.36	25855	86	1109	3	14
1.18	26396	88	541	2	12
0.60	26780	89	384	1	11
0.30	29319	97	2539	8	3
0.15	29773	99	454	2	1
	30000	100	227	1	0
<b>Total</b>					
<b>Fineness Modulu</b>	7.10				

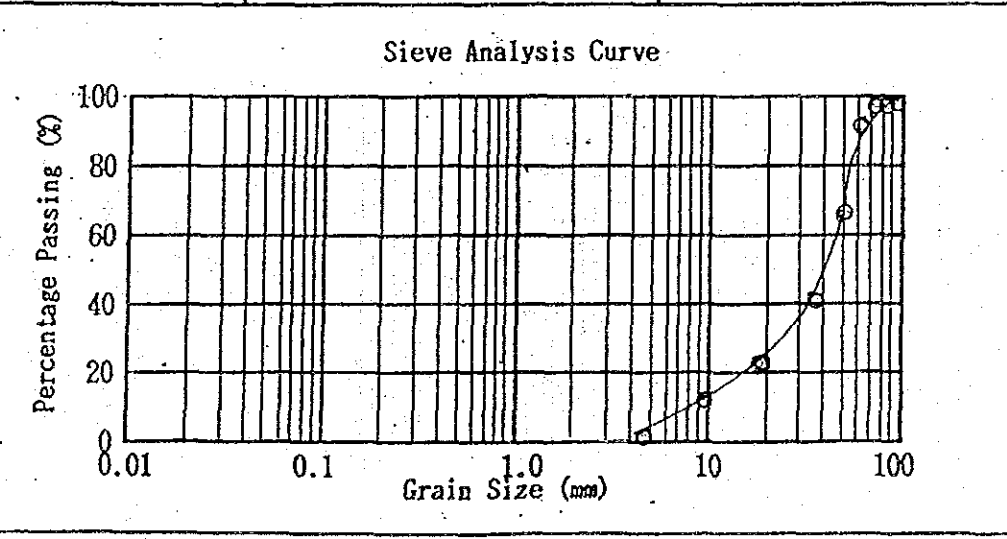




Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
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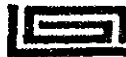
Name of Project	Small Hydro Study For Mukoh	Date	25-6-1987
Sample	TMK-3/Test 1	Tested by	C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					100
63	829	4	829	4	96
50	7,892	35	7,063	31	65
37.5	12,925	58	5,033	23	42
19.0	17,332	78	4,407	20	22
9.5	20,182	91	2,850	13	9
4.75	22,188	100	2,006	9	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	8.27				



Remarks



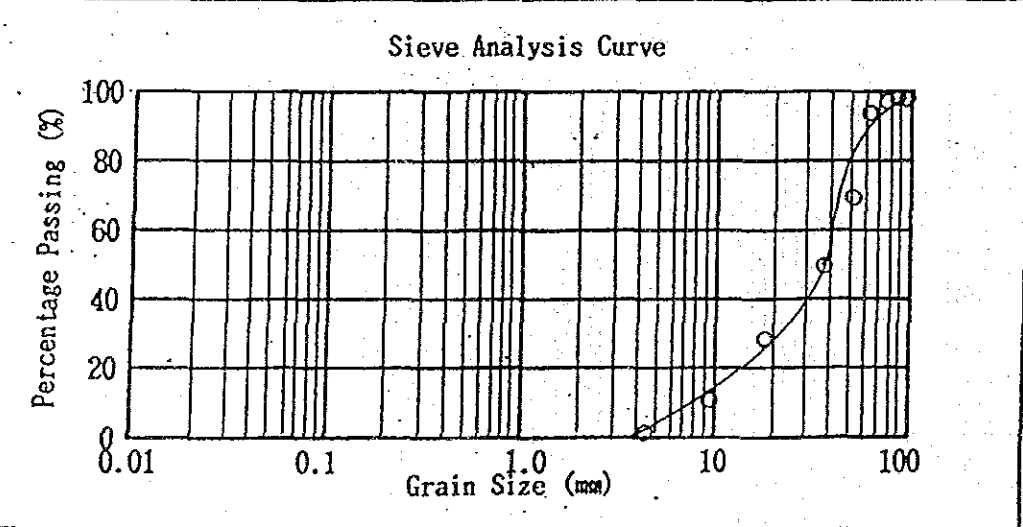


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
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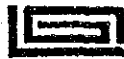
Name of Project	Small Hydro Study For Mukoh	Date	25.6.1987
Sample	TMK-3/Test 2	Tested by	C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100			-		
90			-		
75			-		
63	1,200	5	1,200	5	95
50	6,026	27	4,826	22	73
37.5	10,724	48	4,698	21	52
19.0	16,020	72	5,296	24	28
9.5	19,450	87	3,430	15	13
4.75	22,361	100	2,911	13	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					

Fineness Modulu	8.07	
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Remarks



Name of Test	SIEVE ANALYSIS OF AGGREGATES ( FINE )	ASTM C 136
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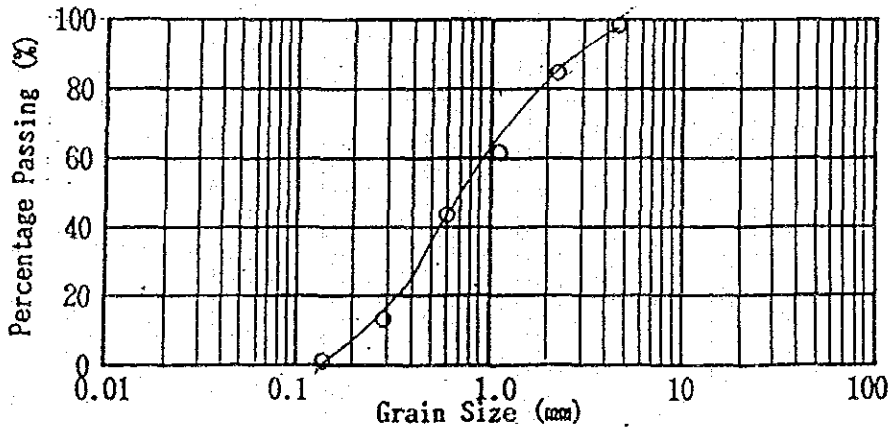
Name of Project Small Hydro Study For Mukoh Date 25.6.1987

Sample TMK-3/Test 1 Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					
2.36	921	15	921	15	85
1.18	2,395	39	1,474	24	61
0.60	3,459	56	1,064	17	44
0.30	5,207	84	1,748	28	16
0.15	6,132	99	925	15	1
0.075	6,182	100	50	1	0
Total					

Fineness Modulu	2.93
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Sieve Analysis Curve



Remarks



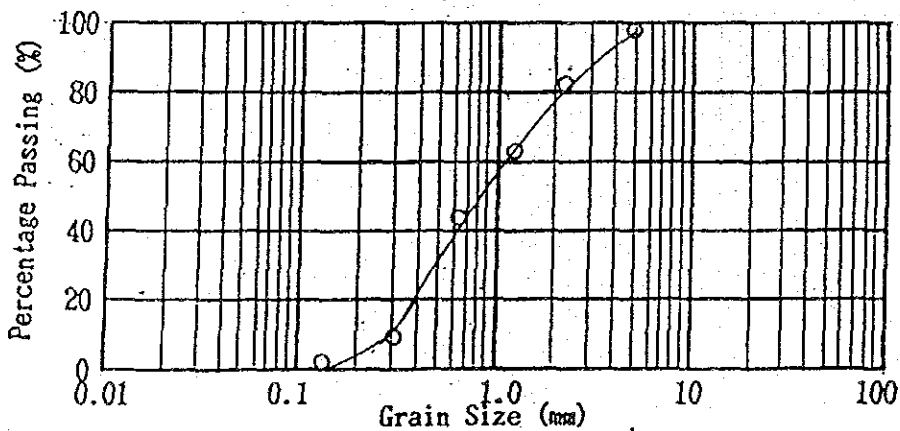
Name of Test	SIEVE ANALYSIS OF AGGREGATES ( FINE )	ASTM C 136
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Name of Project <u>Small Hydro. Study For Mukoh</u>	Date <u>25.6.1987</u>
Sample <u>TMK-3/Test 2</u>	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					
2.36	1,245	16	1,245	16	84
1.18	2,875	37	1,630	21	63
0.60	4,415	57	1,540	20	43
0.30	6,955	91	2,540	34	9
0.15	7,471	98	516	7	2
0.075	7,639	100	168	2	0
Total					

Fineness Modulu	2.99	
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Sieve Analysis Curve

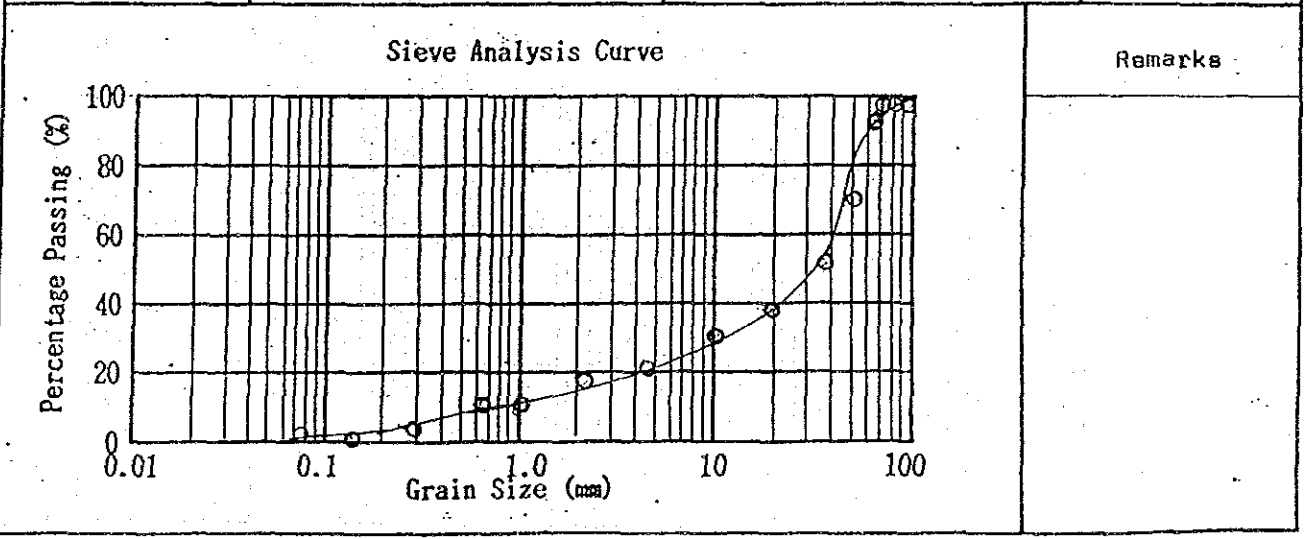


Remarks



Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE + FINE</u> )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date 25-6-1987
Sample	TMK-3/Test 1	Tested by C.S.M.

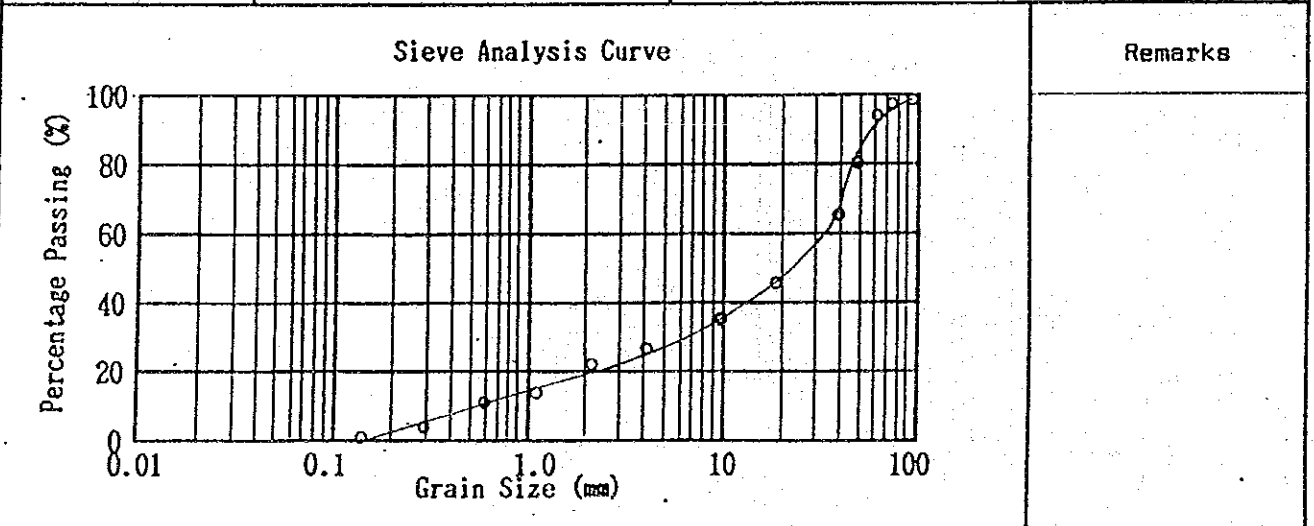
Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100			-		
90			-		
75			-		100
63	829	3	829	3	97
50	7,892	28	7,063	25	72
37.5	12,925	46	5,033	18	54
19.0	17,332	62	4,407	16	38
9.5	20,182	72	2,850	10	28
4.75	22,188	79	2,006	7	21
2.36	23,109	82	921	3	18
1.18	24,583	87	1,474	5	13
0.60	25,647	91	1,064	4	9
0.30	27,395	97	1,748	6	3
0.15	28,320	100	925	3	0
0.075	28,370	100	50	0	0
Total					
Fineness Modulu	7.16				

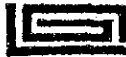




Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE + FINE )	ASTM C 136
Name of Project	Small Hydro. Study For Mukoh	Date 25.6.1987
Sample	TMK-3/Test 2	Tested by C.S.M.

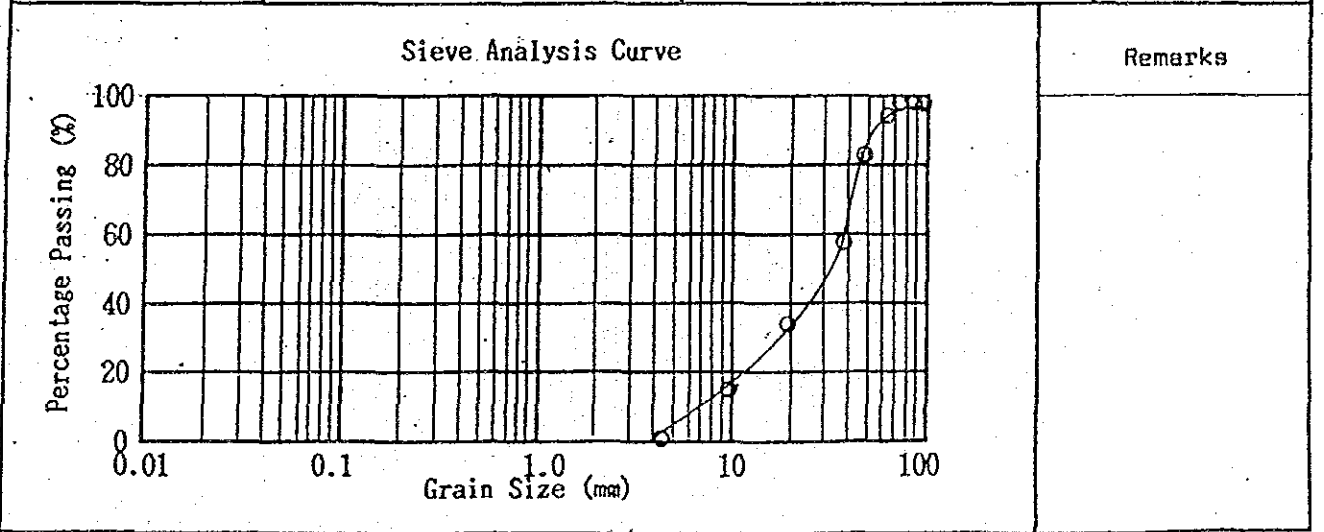
Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100			-		
90			-		
75			-		
63	1200	4	1200	4	96
50	6026	20	4826	16	80
37.5	10724	36	4698	16	64
19.0	16020	54	5296	18	46
9.5	19450	65	3430	11	35
4.75	22361	75	2911	10	25
2.36	23606	79	1245	4	21
1.18	25236	84	1630	5	16
0.60	26776	89	1540	5	11
0.30	29316	97	2540	8	3
0.15	29832	99	516	2	1
	30000	100	168	1	0
Total					
Fineness Modulu	6.78				

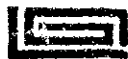




Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date <u>25.6.1987</u>
Sample	TMK-4/Test 1	Tested by <u>C.S.M.</u>

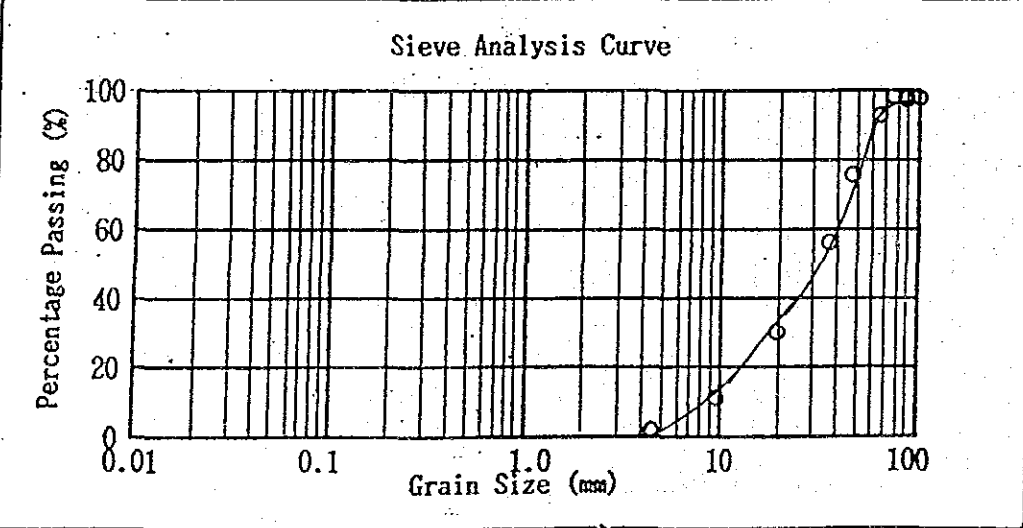
Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63	1,120	5	1,120	5	95
50	3,470	16	2,350	11	84
37.5	8,894	41	5,424	25	59
19.0	14,314	66	5,420	25	34
9.5	18,326	85	4,012	19	15
4.75	21,536	100	3,210	15	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	7.92				





Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
Name of Project	Small Hydra Study For Mukoh	Date <u>25.6.1987</u>
Sample	TM-4/Test 2	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100			-		
90			-		
75			-		
63	1,054	4	1,054	4	96
50	5,750	23	4,696	19	77
37.5	10,446	42	4,696	19	58
19.0	17,462	70	7,016	28	30
9.5	21,522	86	4,060	16	14
4.75	25,057	100	3,535	14	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	7.98				

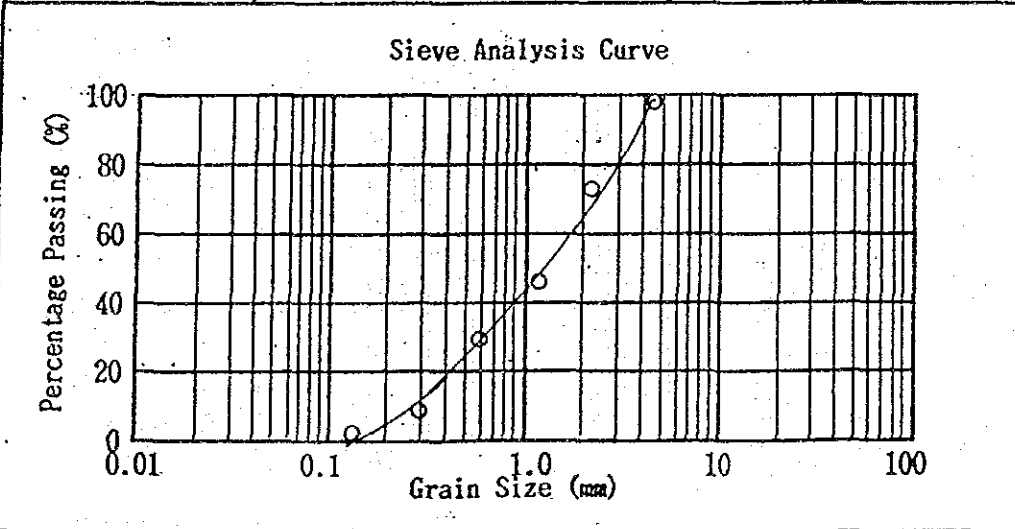


Remarks



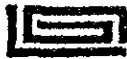
Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>FINE</u> )	ASTM C 136
Name of Project	<u>Small Hydro. Study For Mukoh</u>	Date <u>25.6.1987</u>
Sample	<u>TMK-4/Test 1</u>	Tested by <u>G.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					
2.36	2,031	24	2,031	24	76
1.18	4,331	52	2,300	28	48
0.60	5,872	70	1,541	18	30
0.30	7,810	93	1,938	23	7
0.15	8,183	97	373	4	3
0.075	8,464	100	281	3	0
Total					
Fineness Modulu	3.36				



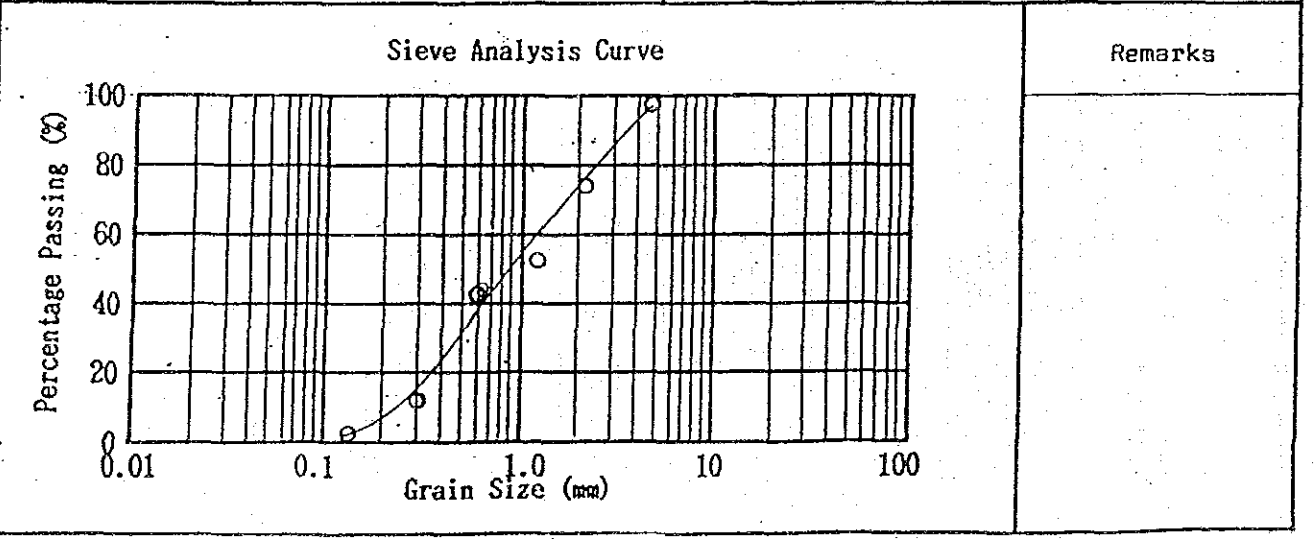
Remarks





Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>FINE</u> )	ASTM C 136
Name of Project	<u>Small Hydro Study For Mukoh</u>	Date <u>25.6.1987</u>
Sample	<u>TMK-4/Test 2</u>	Tested by <u>C.S.M.</u>

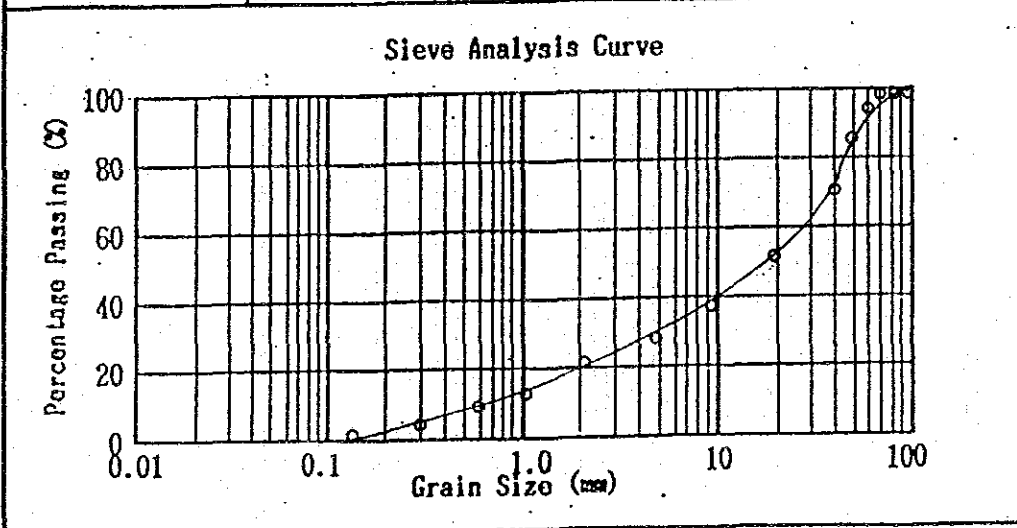
Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					
2.36	1,128	23	1,128	23	77
1.18	2,230	45	1,102	22	55
0.60	2,883	58	653	13	42
0.30	4,197	85	1,314	27	15
0.15	4,689	95	492	10	5
0.075	4,943	100	254	5	0
Total					
Fineness Modulu	3.06				



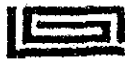


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE + FINE )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date 25.6.1987
Sample	TMK-4/Test 1	Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Height of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100			-		
90			-		
75			-		
63	1120	4	1120	4	96
50	3470	12	2350	8	88
37.5	8894	30	5424	18	70
19.0	14314	48	5420	18	52
9.5	18326	61	4012	13	39
4.75	21536	72	3210	11	28
2.36	23567	79	2031	7	21
1.18	25867	87	2300	8	13
0.60	27408	92	1541	5	8
0.30	29346	98	1938	6	2
0.15	29719	99	373	1	1
	30000	100	281	1	0
Total					
Fineness Modulu	6.66				

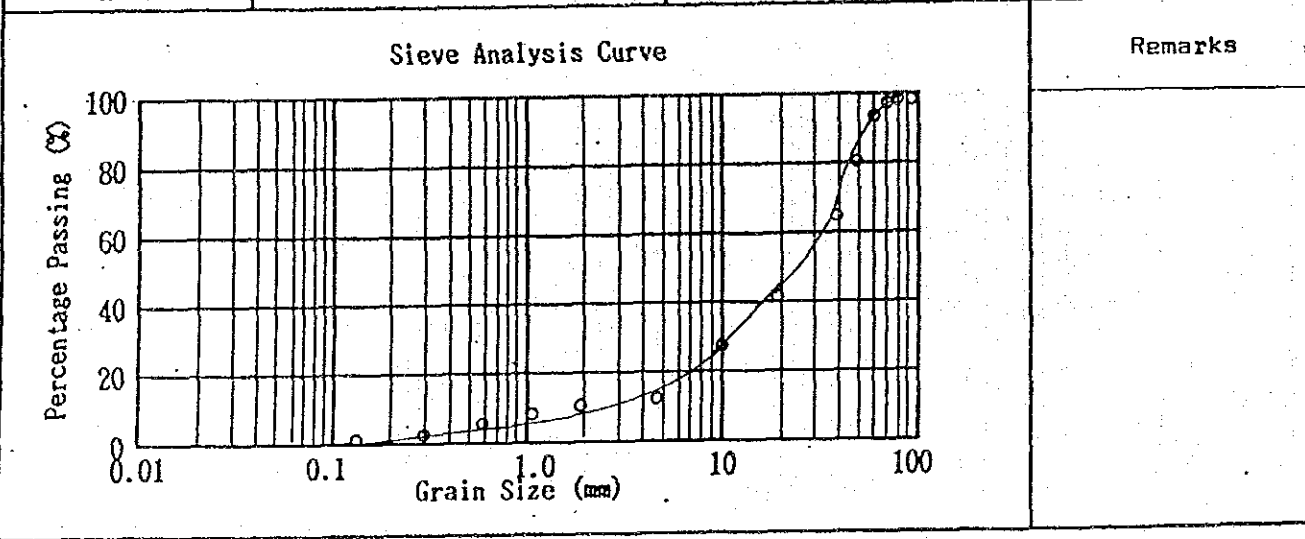


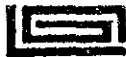
Remarks



Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE + FINE</u> )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date <u>25.6.1987</u>
Sample	TMK-4/Test 2	Tested by <u>G.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100	-	-	-	-	-
90	-	-	-	-	-
75	-	-	-	-	-
63	1054	4	1054	4	96
50	5750	20	4696	16	80
37.5	10446	36	4696	16	64
19.0	17462	59	7016	23	41
9.5	21522	72	4060	13	28
4.75	25057	84	3535	12	16
2.36	26185	88	128	4	12
1.18	27287	92	1102	4	8
0.60	27940	94	653	2	6
0.30	29254	97	1314	3	3
0.15	29746	99	492	2	2
	30000	100	254	1	0
Total					
Fineness Modulu	7.21				

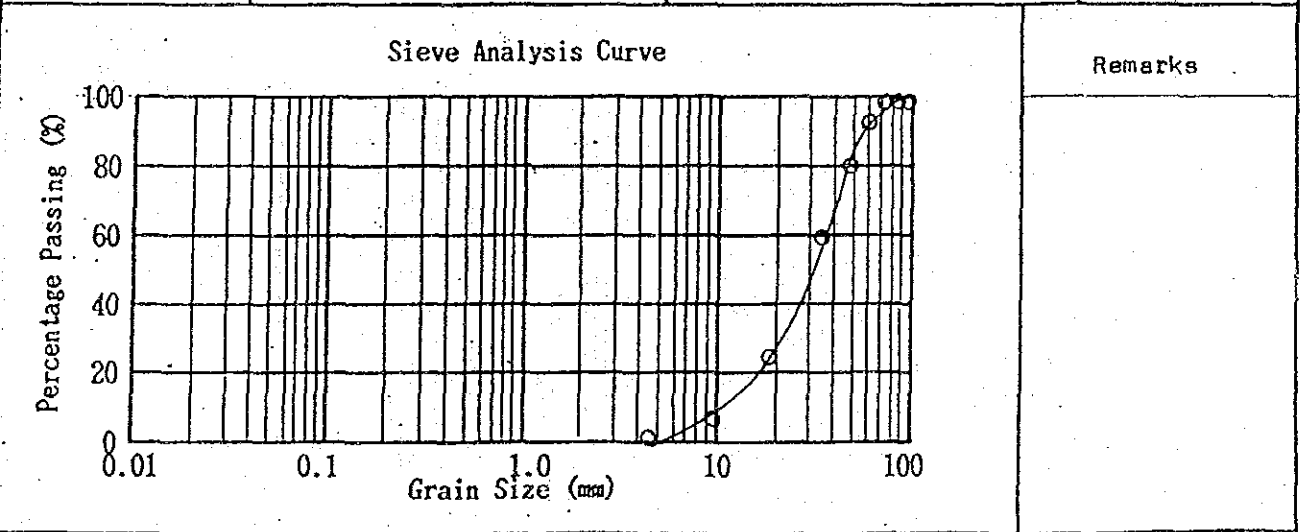




Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
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Name of Project <u>Small Hydro Study For Mukoh</u>	Date <u>25-6-1987</u>
Sample <u>TMK-5/Test 1</u>	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					100
63	635	3	635	3	97
50	4,665	22	4,030	19	78
37.5	8,740	41	4,075	19	59
19.0	16,192	75	7,452	34	25
9.5	19,806	92	3,614	17	8
4.75	21,502	100	1,696	8	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	8.08				

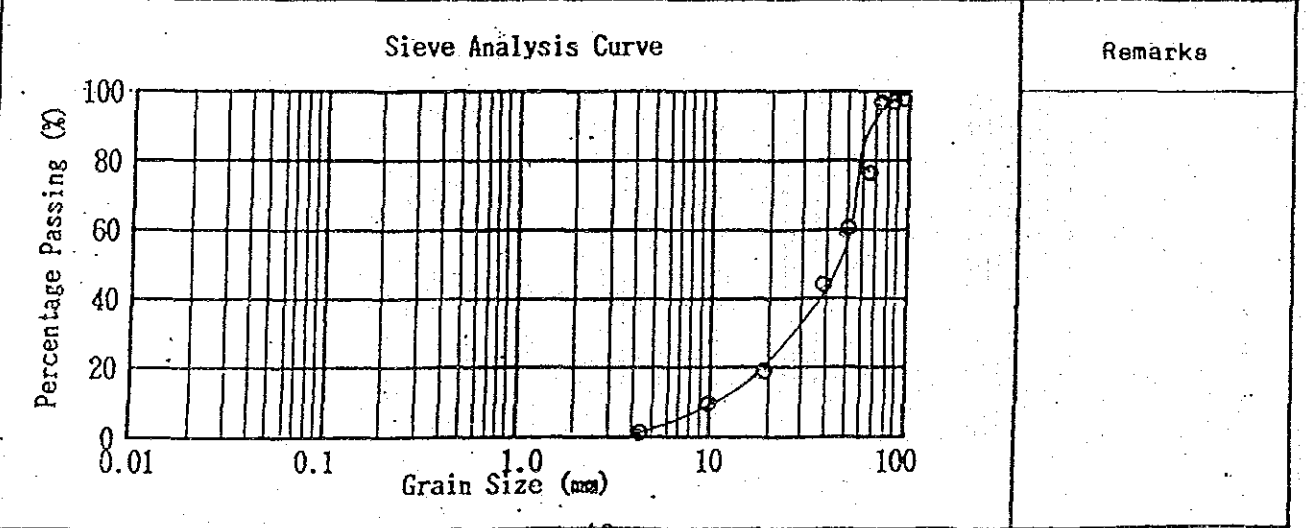




Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
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Name of Project <u>Small Hydro Study For Mukoh</u>	Date <u>25-6-1987</u>
Sample <u>TMK-5/Test 2</u>	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100	-	-	-	-	-
90	-	-	-	-	-
75	-	-	-	-	100
63	5,500	22	5,500	22	78
50	9,810	39	4,310	17	61
37.5	13,935	55	4,125	16	45
19.0	20,425	81	6,490	26	19
9.5	23,585	93	3,160	12	7
4.75	25,301	100	1,716	7	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	8.29				

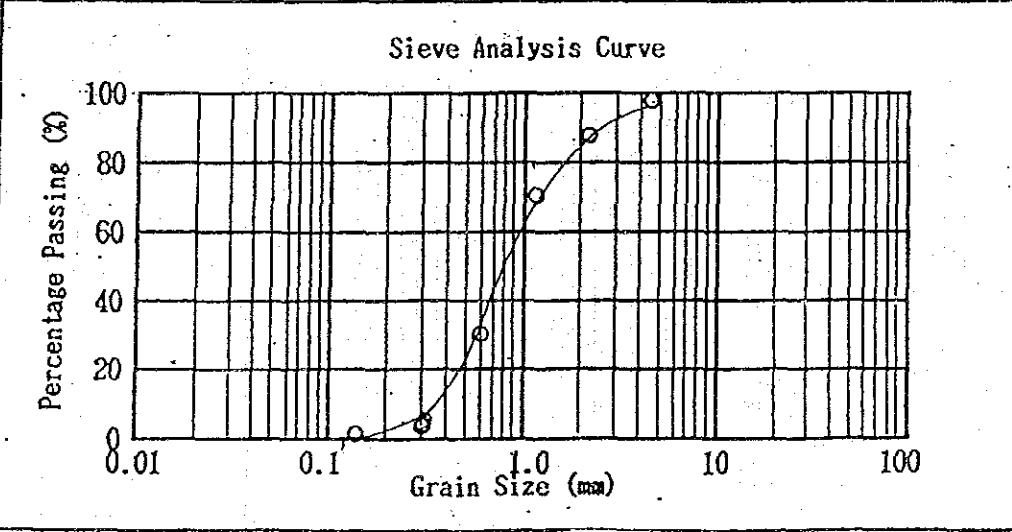




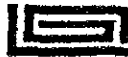
Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>FINE</u> )	ASTM C 136
Name of Project	<u>Small Hydro Study For Mukoh</u>	Date <u>25.6.1987</u>
Sample	<u>TMK-5/Test 1</u>	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					
2.36	718	12	718	12	88
1.18	1,783	29	1,065	17	71
0.60	4,283	69	2,500	40	31
0.30	5,793	93	1,510	24	7
0.15	6,094	98	301	5	2
0.075	6,192	100	98	2	0
Total					

Fineness Modulu	3.01	
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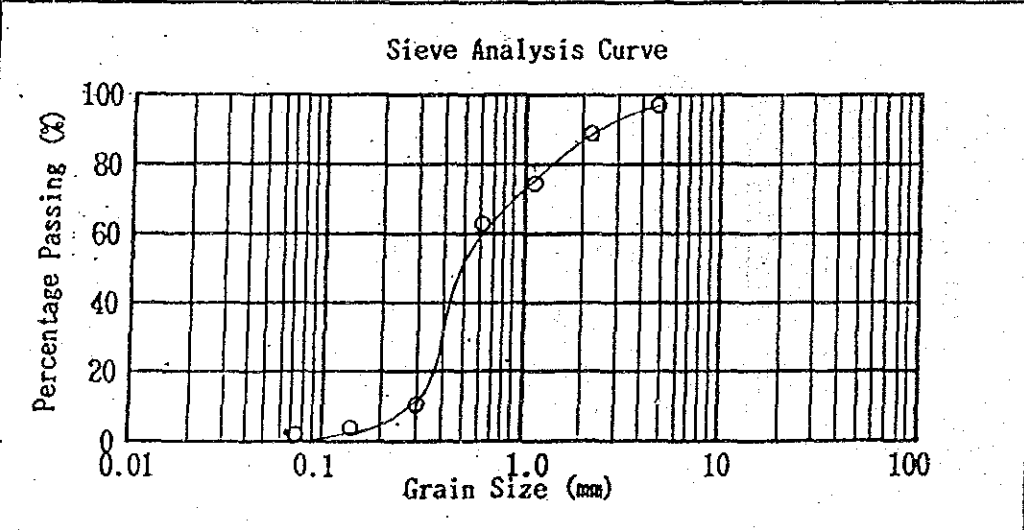
Remarks
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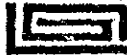
Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>FINE</u> )	ASTM C 136
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Name of Project	Small Hydro Study For Mukoh	Date	25.6.1987
Sample	TMK-5/Test 2	Tested by	C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					
2.36	553	12	553	12	88
1.18	1,130	25	577	13	75
0.60	1,744	39	614	14	61
0.30	3,964	89	2,220	50	11
0.15	4,268	96	304	7	4
0.075	4,425	100	157	4	0
Total					
Fineness Modulu	2.61				



Remarks

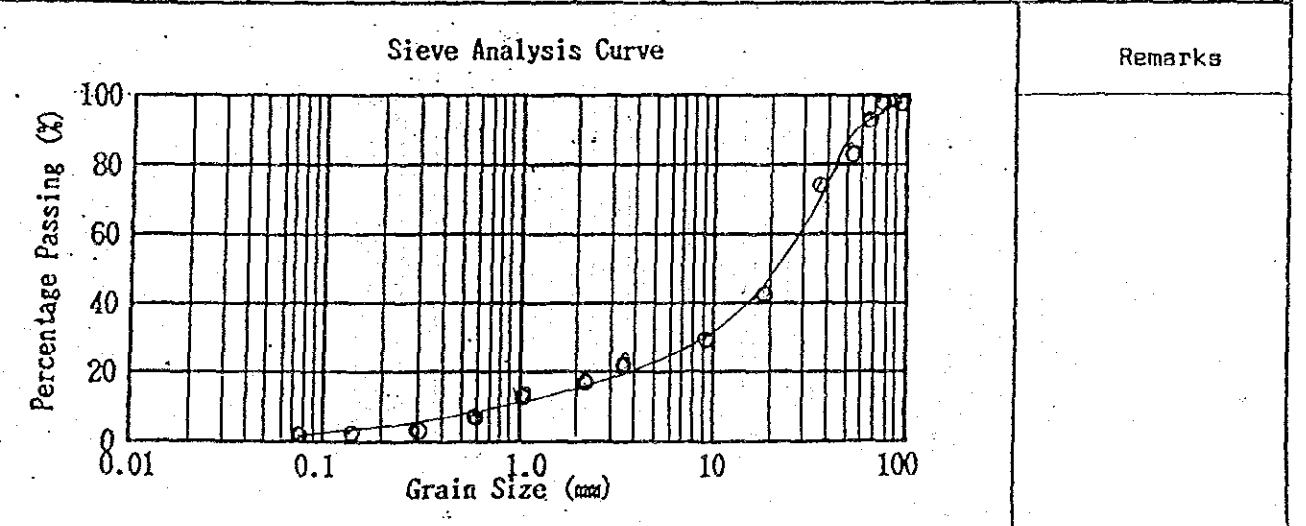


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE + FINE )	ASTM C 136
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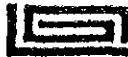
Name of Project <u>Small Hydro Study For Mukoh</u>	Date <u>25.6.1987</u>
Sample <u>TMH-5/Test 1</u>	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					100
63	635	2	635	2	98
50	4,665	17	4,030	15	83
37.5	8,740	32	4,075	15	66
19.0	16,192	59	7,452	27	41
9.5	19,806	72	3,614	13	28
4.75	21,502	78	1,696	6	22
2.36	22,220	81	718	3	19
1.18	23,285	85	1,065	4	15
0.60	25,785	94	2,500	9	6
0.30	27,295	99	1,510	5	1
0.15	27,596	100	301	1	0
0.075	27,694	100	98	0	0
Total					

Fineness Modulu	7.00	
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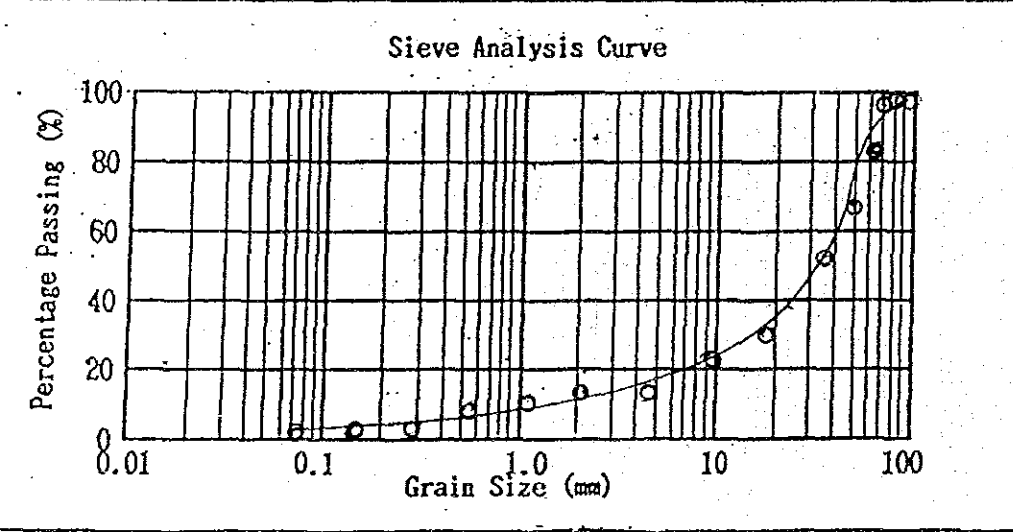


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE + FINE</u> )	ASTM C 136
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Name of Project <u>Small Hydro Study For Mukoh</u>	Date <u>25.6.1987</u>
Sample <u>TMK-5/Test 2</u>	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100	-	-	-	-	-
90	-	-	-	-	-
75	-	-	-	-	100
63	5,500	19	5,500	19	81
50	9,810	33	4,310	14	67
37.5	13,935	47	4,125	14	53
19.0	20,425	68	6,490	21	32
9.5	23,585	79	3,160	11	21
4.75	25,301	85	1,716	6	15
2.36	25,854	87	553	2	13
1.18	26,431	89	577	2	11
0.60	27,045	91	614	2	9
0.30	29,265	89	2,220	7	2
0.15	29,569	99	304	1	1
0.075	29,726	100	157	1	0
Total					

Fineness Modulu	7.34
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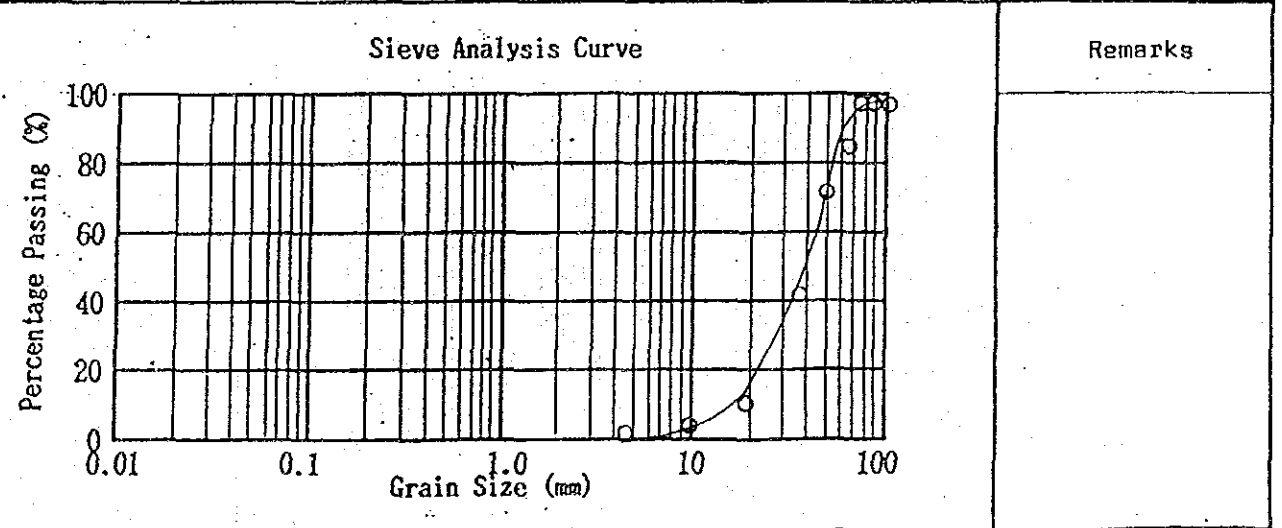
Remarks
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Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
Name of Project	<u>Small Hydro Study For Mukoh</u>	Date <u>8.7.1987</u>
Sample	<u>TMK-6/Test. 1</u>	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100			-		
90			-		
75			-		
6.3	3,564	14	3,564	14	86
5.0	8,598	34	5,034	20	66
3.7.5	14,852	59	6,254	25	41
19.0	21,358	86	6,506	27	14
9.5	23,738	96	2,380	10	4
4.75	24,671	100	933	4	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					

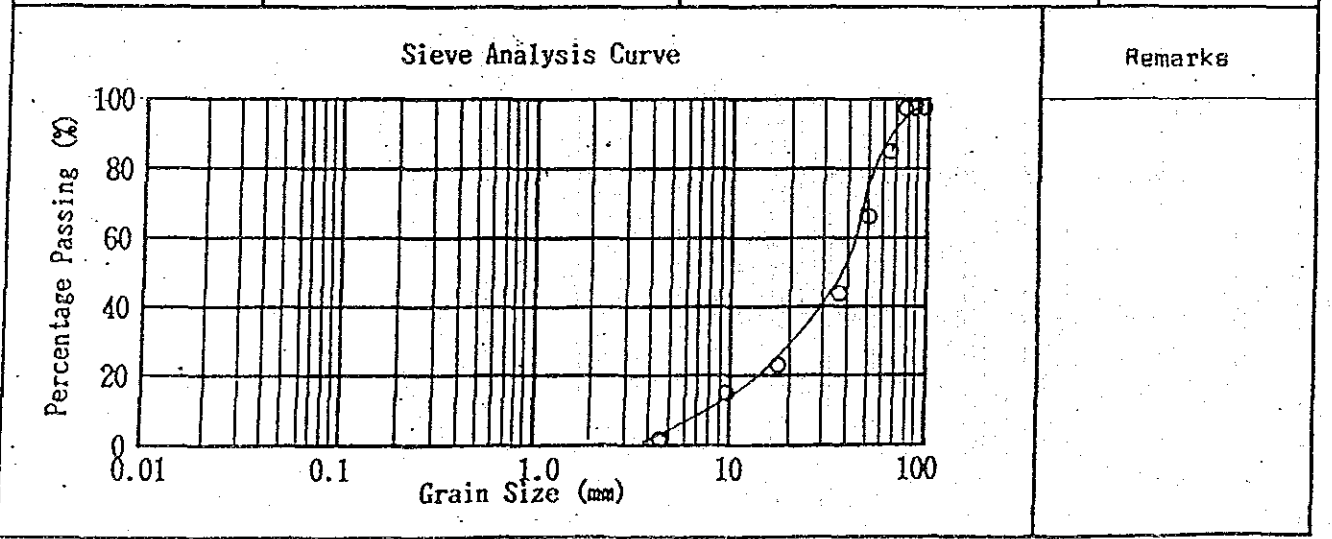
Fineness Modulu 8.41

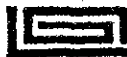




Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>COARSE</u> )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date <u>8.7.1987</u>
Sample	TMK-6/Test 2	Tested by <u>G.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100	-	-	-	-	-
90	-	-	-	-	-
75	-	-	-	-	-
63	3,830	15	3,830	15	85
50	9,024	35	5,194	20	65
37.5	13,474	52	4,450	17	48
19.0	19,000	74	5,526	22	26
9.5	22,222	87	3,222	13	13
4.75	25,458	100	3,236	13	0
2.36					
1.18					
0.60					
0.30					
0.15					
Total					
Fineness Modulu	8.13				

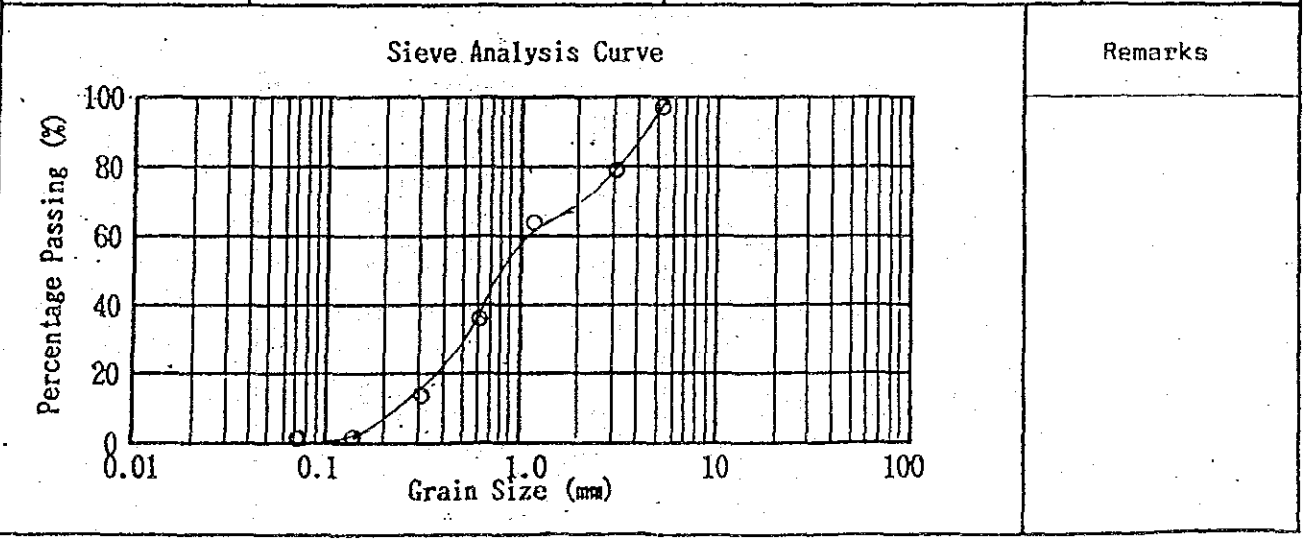


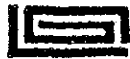


Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>    FINE    </u> )	ASTM C 136
Name of Project	<u>Small Hydra Study For Mukah</u>	Date <u>8.7.1987</u>
Sample	<u>TMK-6/Test 1</u>	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					
2.36	1,090	20	1,090	20	80
1.18	2,070	38	980	18	62
0.60	3,301	61	1,231	23	39
0.30	4,453	82	1,152	21	18
0.15	5,305	98	852	16	2
0.075	5,429	100	124	2	0
Total					

Fineness Modulu	2.99	
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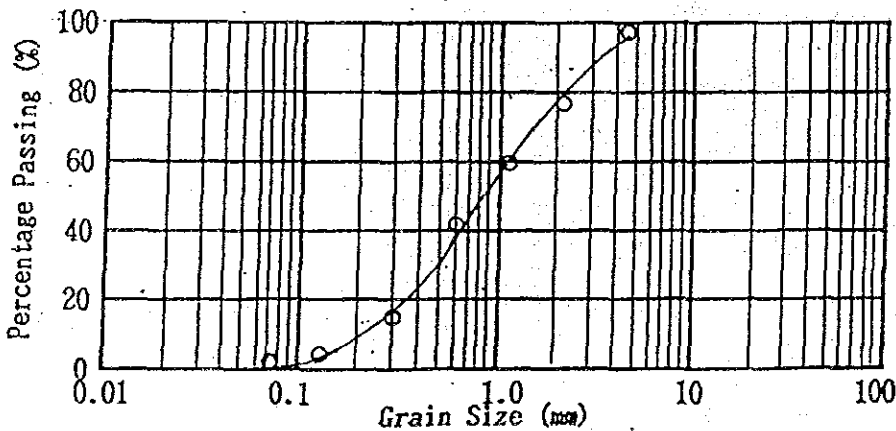




Name of Test	SIEVE ANALYSIS OF AGGREGATES ( <u>FINE</u> )	ASTM C 136
Name of Project	Small Hydro Study For Mukoh	Date <u>8.7.1987</u>
Sample	TMK-6/Test 2	Tested by <u>C.S.M.</u>

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100					
90					
75					
63					
50					
37.5					
19.0					
9.5					
4.75					
2.36	1,042	23	1,042	23	77
1.18	1,796	40	754	17	60
0.60	2,582	57	786	17	43
0.30	3,764	83	1,182	26	17
0.15	4,270	94	506	11	6
0.075	4,542	100	272	6	0
Total					
Fineness Modulu	2.97				

Sieve Analysis Curve



Remarks

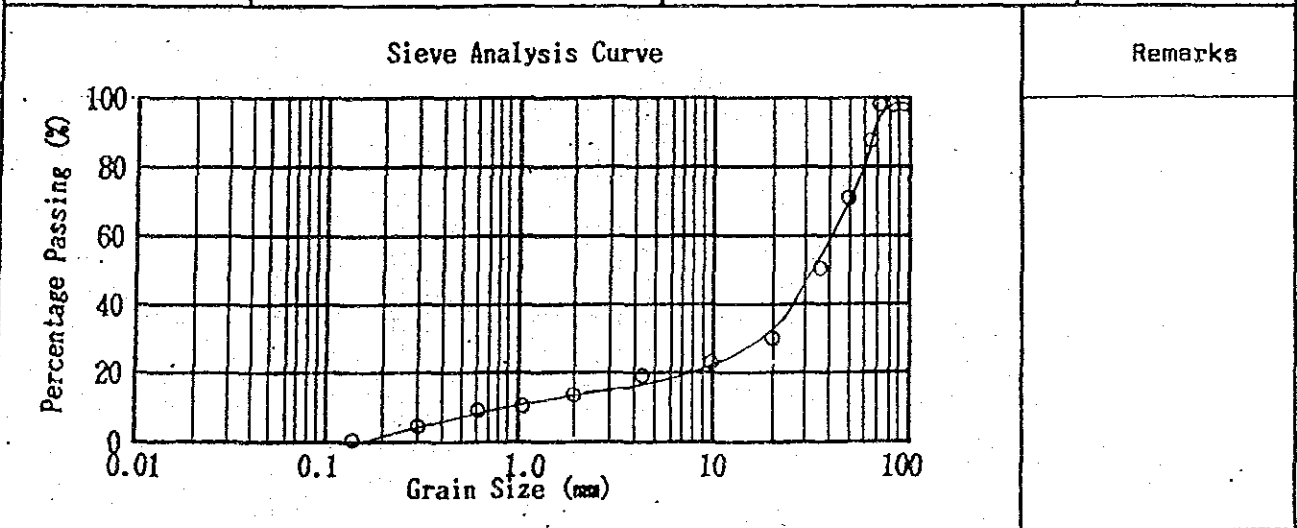


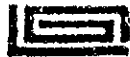
Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE+FINE )	ASTM C 136
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Name of Project Small Hydro Study For Mukoh Date 8-7-1987

Sample TMK-6/Test 1 Tested by C.S.M.

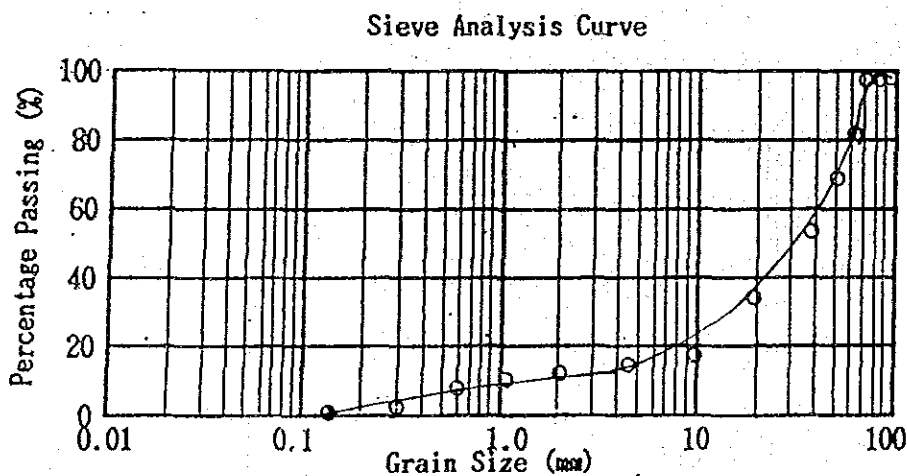
Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100	-	-	-	-	-
90	-	-	-	-	-
75	-	-	-	-	-
63	3564	12	3564	12	88
50	8598	28	5034	16	72
37.5	14852	48	6254	20	52
19.0	21358	69	6506	21	31
9.5	23730	77	2380	8	23
4.75	24671	80	933	3	20
2.36	25761	84	1090	4	16
1.18	26641	87	880	3	13
0.60	27872	91	1231	4	9
0.30	29024	95	1152	4	5
0.15	29876	99	852	4	1
	30000	100	124	1	0
<b>Total</b>					
<b>Fineness Modulu</b>	<b>7.30</b>				





Name of Test	SIEVE ANALYSIS OF AGGREGATES ( COARSE+FINE )	ASTM C 136
Name of Project	Small Hydro Study For Mukah	Date 8-7-1987
Sample	TMK-6/Test 2	Tested by C.S.M.

Sieve Opening (mm)	Cumulative Weight of Retained		Weight of Retained		Passing (%)
	(g)	(%)	(g)	(%)	
100	-	-	-	-	-
90	-	-	-	-	-
75	-	-	-	-	-
63	3830	13	3830	13	87
50	9024	30	5194	17	70
37.5	13474	45	4450	15	55
19.0	19000	62	5526	17	38
9.5	22222	73	3222	11	27
4.75	25458	84	3236	11	16
2.36	26500	87	1042	3	13
1.18	27254	90	754	3	10
0.60	28040	93	786	3	7
0.30	29222	97	1182	4	3
0.15	29728	99	506	2	2
	30000	100	272	1	0
<b>Total</b>					
<b>Fineness Modulu</b>	<b>7.30</b>				



Remarks