

GASIFICATION PLANT

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FIC-6A	NO.1 O <sub>2</sub> BLOWER	0~5000 Nm <sup>3</sup> /h	2850 Nm <sup>3</sup> /h	90%	—	0	0	0	0	—	CONTROLLER OVERHAULED / GOOD
FIC-6B	NO.2 O <sub>2</sub> BLOWER	"	0 STOP	0	—	0	0	0	0	—	CONTROLLER OVERHAULED / GOOD
FR-8	O <sub>2</sub> CONSUMPTION	0~5000 Nm <sup>3</sup> /h	2800 Nm <sup>3</sup> /h	—	0	—	—	0	—	—	
FR-9 A1	O <sub>2</sub> FLOW BLOW-PIPE 1	0~1500 Nm <sup>3</sup> /H	780 Nm <sup>3</sup> /H	—	0	0	—	0	—	H X	
" A2	" BLOW-PIPE 2	"	675 Nm <sup>3</sup> /H	—	0	0	—	0	—	H X	
" B1	" BLOW-PIPE 3	"	600 Nm <sup>3</sup> /H	—	0	0	—	0	—	H X	
" B2	" BLOW-PIPE 4	"	675 Nm <sup>3</sup> /H	—	0	0	—	0	—	H X	
FR-11	O <sub>2</sub> EMERSION SHAFT	0~200 Nm <sup>3</sup> /H	130 Nm <sup>3</sup> /H	—	—	0	—	0	—	—	
FI-13	COOLING WATER TO THE WASHER	0~200 m <sup>3</sup> /H	116 m <sup>3</sup> /H	—	—	0	—	0	—	—	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FI-14A	NO.1 THEISEN WATER	0~30 m <sup>3</sup> /H	15 m <sup>3</sup> /H	-	-	0	-	0	-	-	
" -14B	NO.2 THEISEN WATER	"	16.2 m <sup>3</sup> /H	-	-	0	-	0	-	-	
FI-15	COOLING WATER TO FINAL COOLER	0~20 m <sup>3</sup> /H	7 m <sup>3</sup> /H	-	-	0	-	0	-	-	
FR-16	SYNTHESIS GAS	0~12500 Nm <sup>3</sup> /H	8000 Nm <sup>3</sup> /H	-	0	-	-	0	-	-	ORIFICE CLEANED
FI-20	STEAM	0~11000 Nm <sup>3</sup> /H	1150 Nm <sup>3</sup> /H	-	-	0	-	0	-	-	
FI-21	N <sub>2</sub> GAS	0~300 Nm <sup>3</sup> /H	0 Nm <sup>3</sup> /H	-	-	0	-	0	-	-	
FI-23	WASHER WATER	0~100 %	46%	-	-	Δ	-	Δ	-	-	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
PIC-3	NO.1 N <sub>2</sub> BLOWER	0~10000 mmWG	7500 mmWG	0%	-	0	0	0	0	-	CONTROLLER OVERHAULED / GOOD
PIC-4	NO.2 N <sub>2</sub> BLOWER	"	0	0	-	0	0	0	0	-	CONTROLLER OVERHAULED / GOOD
PIA-5	N <sub>2</sub> VESSELS	"	5400 mmWG	-	-	0	-	0	-	H × L	
PGA-8A	O <sub>2</sub> BLOWER	0~4 kp/cm <sup>2</sup>	1.0 kp/cm <sup>2</sup>	-	-	-	-	-	-	H × L	
PGA-8B	"	"	0	-	-	-	-	-	-	H × L	
PRA-10	O <sub>2</sub> MAIN	0~10000 mmWG	5000 mmWG	-	0	-	-	0	-	H × L	
PIA-11A1	O <sub>2</sub> PRESS	0~2500 mmWS	1300 mmWS	-	-	0	-	0	-	H × L	
" A2	"	"	1500 mmWS	-	-	0	-	0	-	H × L	
" B1	"	"	1350 mmWS	-	-	0	-	0	-	H × L	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
PIA-11B2	O <sub>2</sub> PRESS	0~2500 mmWS	1200 mmWS	—	—	0	—	0	—	H × L	
PR-13	IMMERSION SHAFT	-160~0 ~+250 mmWS	+90 mmWS	—	0	—	—	0	—	—	
PRCA-19	SYN GAS BLOWER	-400~0 ~+250 mmWS	+250 mmWS	75%	0	0	0	0	Δ	H × L	CONTROLLER OVERHAULED / GOOD
PRCA-21	SYN GAS. BOOSTERS	0~1000 mmWS	+400 mmWS	75%	0	0	0	0	Δ	H × L	
PI-22	SYN GAS BOOSTERS OUT	0~6000 mmWS	2400 mmWS	—	—	0	—	0	—	—	
PGA-23A	WASH SPRAY	0~6 kp/cm <sup>2</sup>	5 kp/cm <sup>2</sup>	—	—	Δ	—	—	—	× L	
PGA-23B	PUMP HOUSE	"	3 kp/cm <sup>2</sup>	—	—	Δ	—	—	—	× L	
PIA-25	SYN GAS SEAL POT	0~1600 mmWS	600 mmWS	—	—	0	—	0	—	H ×	
PIA-27	COOLING WATER PUMP	0~10 kp/cm <sup>2</sup>	5.2 kp/cm <sup>2</sup>	—	—	0	—	—	—	× L	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
PR-35A	SERVICE BIN A	0~1000 mmWS	100 mmWS	-	0	-	-	0	-	-	
PR-35B	" B	"	"	-	0	-	-	0	-	-	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
LICA-5	STEAM DRUM	0~500 mm	250 mm	10%	—	0	0	0	X	H X L	CONTROLLER AND CONTROL VALVE BOTH WERE OVERHAULED CV IS TO BE REDUCED
LA-2+6 I	SERVICE BIN	H 1m L 3m	—	—	—	—	—	Δ	—	H Δ L	"L" ALARM NOT GOOD CHANGE ALL IS BETTER
LA-2+6 II	"	H 1m L 3m	—	—	—	—	—	Δ	—	H Δ L	"L" ALARM NOT GOOD CHANGE ALL IS BETTER
SIA-1 A1	REVOLUTION OF SCREW A1	0 110 u/min	50 u/min	—	—	0	—	0	—	X L	SWITCH NOT GOOD
" A2	" A2	"	"	—	—	0	—	0	—	X L	SWITCH NOT GOOD
" B1	" B1	"	"	—	—	0	—	0	—	X L	SWITCH NOT GOOD
" B2	" B2	"	"	—	—	0	—	0	—	X L	SWITCH NOT GOOD
CO <sub>2</sub> R-2	THEISEN OUTLET	0~25 vol%CO <sub>2</sub>	—	—	Δ	—	—	X	—	—	TO BE REPLACED
O RA-1	SYN-GAS	0~1 0~5 vol%O <sub>2</sub>	—	—	Δ	0	—	X	—	—	TO BE REPLACED

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TGA-12B	O <sub>2</sub> BLOWER	0~160°C	90°C	0	—	0	—	0	OH	
" -12B	"	"	25°C	0	—	0	—	0	OH	
TR-20/1	O <sub>2</sub> MAIN	0~150°C	85°C	0	0	—	Δ	—	—	ELEMENT CHANGED / OK, RECORDER TO BE REPLACED
" 2										
" 3										
" 4										
" 5										
" 6										
TR-23/1	TUBULER BOILER IN LET	50~1600°C	630°C	0	Δ	0	Δ	—	—	ELEMENT CHANGED / OK, RECORDER TO BE REPLACED
" 2	"	"	"	0	Δ	0	Δ	—	—	
" 3	"	"	"	0	Δ	0	Δ	—	—	
" 4	TUBULER BOILER OUT LET	"	350°C	0	Δ	0	Δ	—	—	
" 5	"	"	"	0	Δ	0	Δ	—	—	
" 6	"	"	"	0	Δ	0	Δ	—	—	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TR-24/l	WASHER	0~100°C	62°C	0	0		△	—	—	ELEMENT CHANGED / OK AND RECORDER TO BE CHANGED
" 2	FINAL COOLER	"	32	0	0		△	—	—	"
" 3	BEFORE ORIFICE	"	51	0	0		△	—	—	"
" 4	WASHER	"	62	0	0		△	—	—	"
" 5	FINAL COOLER	"	32	0	0		△	—	—	"
" 6	BEFORE ORIFICE	"	51	0	0		△	—	—	"



TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
HV-1A1	O <sub>2</sub> GASIFIER IN	0~100%	35%	—	—	0	—	—	0	Δ	SWITCH NOT GOOD / TO BE RENEWED
" -1A2	"	"	24	—	—	0	—	—	0	Δ	"
" -1B1	"	"	40	—	—	0	—	—	0	Δ	"
" -1B2	"	"	15	—	—	0	—	—	0	Δ	"
" -2A1	N <sub>2</sub> GASIFIER IN	0~600 μA	0%	—	—	0	—	—	0	Δ	"
" -2A2	"	"	0	—	—	0	—	—	0	Δ	"
" -2B1	"	0~100%	0	—	—	0	—	—	0	X	"
" -2B2	"	"	0	—	—	0	—	—	0	X	"
" -3	SYN GAS FLARE	"	0	—	—	0	—	—	0	Δ	"

TAG, NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
HV-4	N <sub>2</sub> SEAL POT IN	0~100 %	100%	—	—	0	—	—	0	Δ	SWITCH NOT GOOD / TO BE RENEWED
" -5	N <sub>2</sub> BY-PASS	"	0	—	—	0	—	—	0	Δ	"
" -6	SYN GAS BLOWER	"	0	—	—	0	—	—	0	Δ	"
" -7A1	PIV-GEAR	0~30 A	6 A	—	—	0	—	—	—	Δ	"
" -7A2	"	"	5.5 A	—	—	0	—	—	—	Δ	"
" -7B1	"	"	5.1 A	—	—	0	—	—	—	Δ	"
" -7B2	"	"	5.5 A	—	—	0	—	—	—	Δ	"
PIA-1	HYDRAULIC OIL	32 ~ 42 kp/cm <sup>2</sup>	39 kp/cm <sup>2</sup>	—	—	0	—	0	—	H X L	PRESSURE GAUGE TO BE RENEWED

## GRINDING PLANT

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FI-1	VAPOUR BLOWER	0~3100 Nm <sup>3</sup> /H		—	—	0	—	0	—	—	LEED PIPE NOT GOOD / CLEANING ONCE/YEAR
FI-2	VAPOUR BOOSTER	0~15000 Nm <sup>3</sup> /H	7500 Nm <sup>3</sup> /H	—	—	0	—	0	—	—	CLEANING ONCE/YEAR
FI-5	COMBUSTION AIR	0~11000 Nm <sup>3</sup> /H	4950 Nm <sup>3</sup> /H	—	—	0	—	0	—	—	
TRC-6	"	0~5500 Nm <sup>3</sup> /H	2750 Nm <sup>3</sup> /H	50%	0	—	Δ	0	Δ	—	CONTROLLER IS USED ONLY BY MANUAL
FI-9	BLOWER F5	0~11000 Nm <sup>3</sup> /H	7150 Nm <sup>3</sup> /H	—	—	0	—	0	—	—	CLEANING ONCE/YEAR
FI-10	N <sub>2</sub> BLOWER	0~8000 Nm <sup>3</sup> /H	400 Nm <sup>3</sup> /H	—	—	0	—	0	—	—	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
PI-1	OUTLET HOT GAS PRODUCER	-150~0 ~+250 mmWS	+0 mmWS	-	-	0	-	0	-	-	
" -2	DUST SPARATOR	-630~0 ~+400 mmWS	-250 mmWS	-	-	0	-	0	-	-	
PRCA-4	ELECTRO FILTER	-160~0 ~+250 mmWS	+10 mmWS	x	x	0	x	Δ	x	0 <sub>L</sub>	TO BE REPLACED
PDI-10	PRIMARY AIR	0~63 mmWS	60 mmWS	-	-	0	-	0	-	-	
PIA-12	COMBUSTION FUEL	0~250 mmWS	60 mmWS	-	-	0	-	Δ	-	0 <sub>H</sub>	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
LA-3	FINISHED DUST BUNKER	H 4m L 8m	-	-	-	-	-	X	-	H X L	TRANSMITTER TO BE RENEWED
LA-4	LIGHT FUEL OIL TANK		-	-	-	-	-	O	-	Δ L	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TRA-1/1	COAL SHAFT	50~750°C	360°C	0	Δ	0	Δ	—	X	} RECORDED TO BE RENEWED
" 2	"	"	X	X	Δ	0	Δ	—	X	
" 3	"	"	430	0	Δ	0	Δ	—	X	
" 4	"	"	270	0	Δ	0	Δ	—	X	
" 5	"	"	X	X	Δ	0	Δ	—	X	
" 6	"	"	126°C	0	Δ	0	Δ	—	X	
TR-2/1	SICHTER	0~200°C	126°C	0	0	—	Δ	—	—	ELEMENT CHANGED / RECORDER TO BE RENEWED
" 2	BEHIND SEPARATOR	"	132	0	0	—	Δ	—	—	"
" 3	ELECTRO FILTER	"	130	0	0	—	Δ	—	—	"
" 4	SECONDARY AIR	"	73	0	0	—	Δ	—	—	"
" 5	MIXTURE	"	78	0	0	—	Δ	—	—	"
" 6	SEKUNDUR LUFF	"	137	0	0	—	Δ	—	—	"
TRA-3/1	FINISHED DUST BUNKER 1350mm	0~200°C	82	0	0	—	Δ	—	—	ELEMENT INSTALLED
" 2	"	"	—	—	—	—	Δ	—	—	SPACE RECORDER WAS REPAIRED AND MOUNTED,
" 3	FINISHED DUST DUNKER 6350mm	"	90	0	0	—	Δ	—	X	YET IT'S BETTER TO BE RENEWED
" 4	"	"	—	—	—	—	Δ	—	X	
" 5	FINISHED DUST BUNKER 3800mm	"	87	0	0	—	Δ	—	X	
" 6	OUTLET	"	55	0	0	—	Δ	—	X	
TI-7	OUTLET HOT GAS PRODUCER	50~120°C	590°C	0	Δ	—	—	0	—	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
O <sub>2</sub> RA-1	HOT GAS PRODUCER	0~2l	4.5%	—	X	0	—	0	—	H Δ L	SAMPLING SYSTEM AND SAMPLING PUMP TO BE RENEWED
O <sub>2</sub> RA-2	ELECTRO FILTER	"	10	—	X	0	—	0	—	H Δ L	"
O <sub>2</sub> RA-3	FINISHED DUST BUNKER	"	0.5	—	X	0	—	0	—	H Δ L	"

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
HV-1	BLOWER F2	0~100 %	-	45%	-	0	-	-	0	Δ	SWITCH TO BE RENEWED
" -2	BOOSTER F3	"	-	52	-	0	-	-	0	Δ	"
" -3	ROLLER FEEDER	"	-	35	-	0	-	-	0	Δ	"
" -4	ERKO BELT FEEDER	"	-	54	-	0	-	-	0	Δ	"
" -5	PRIMARY AIR	0~600 μA	-	200 μA	-	0	-	-	0	Δ	"
" -6	SECONDARY AIR	0~100 %	-	20%	-	0	-	-	0	Δ	"
" -7	ELECTRO FILTER OUT	"	-	42	-	0	-	-	0	Δ	"
" -8/1	BEHIND SEPARATOR	"	-	100	-	0	-	-	0	Δ	"
" -8/2	"	"	-	100	-	0	-	-	0	Δ	"



TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
HV-9	STARTING STACK	0~100 %	—	0%	—	0	—	—	0	Δ	SWITCH TO BE RENEWED
" -10	FLUE GAS	0~600 μA	—	570 μA	—	0	—	—	0	Δ	"
" -11	N <sub>2</sub> INERTISATION	"	—		—	0	—	—	0	Δ	INDICATOR CHANGED / OK SWITCH TO BE CHANGED
HSV-12	N <sub>2</sub> LINE	0~100 %	—	0%	—	0	—	—	Δ	Δ	SWITCH TO BE CHANGED
FVA-11	COMBUSTION AIR	SHUT -OPEN	OPEN	—	—	—	—	—	Δ ON-OFF VALVE	—	MAGNET VALVE NOT GOOD
FV-12	FUEL OIL	SHUT -OPEN	OPEN	—	—	—	—	—	Δ ON-OFF VALVE	Δ	HAND CONTROLLED MAGNET VALVE NOT GOOD TO BE REPLACED

FEED WATER PLANT

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FR-3-65-01	30 <sup>K</sup> STEAM	0~12 t/H	12 t/H	—	Δ	—	—	×	—	—	TRANSMITTER TO BE CHANGED
PRC-3-65-01	30 <sup>K</sup> STEAM	0~50 kg/cm <sup>2</sup>	25 kg/cm <sup>2</sup>	35%	0	—	0	0	0	—	CONTROL VALVE, CONTROLLER, RECORDER AND TRANSMITTER CHANGED
PRC-3-65-02	10 <sup>K</sup> STEAM	0~15 kg/cm <sup>2</sup>	7 kg/cm <sup>2</sup>	90%	0	—	0	0	0	—	CONTROLLER, RECORDER AND TRANSMITTER CHANGE CONTROL VALVE OVERHAULED / GOOD
PRC-3-65-03	3 <sup>K</sup> STEAM	0~5 kg/cm <sup>2</sup>	2.8 kg/cm <sup>2</sup>	100%	Δ	—	0	0	0	—	TRANSMITTER, CONTROLLER CHANGED CONTROL VALVE OVERHAULED / GOOD
PC-3-65-10	DEAREATOR	—	—	—	—	—	—	—	Δ	—	CONTROL SYSTEM TO BE CHANGED
PIA-3-65-13	STEAM TURBINE	0~63 kg/cm <sup>2</sup>	30 kg/cm <sup>2</sup>	—	—	0	—	—	—	—	
PIA-3-65-05	STEAM	"	15 kg/cm <sup>2</sup>	—	—	0	—	—	—	—	

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PIA-3-65-02	10 <sup>K</sup> STEAM	0~25 kg/cm <sup>2</sup>	8 kg/cm <sup>2</sup>	—	—	0	—	—	—	0	
PIA-3-65-03	3 <sup>K</sup> STEAM	0~10 kg/cm <sup>2</sup>	3 kg/cm <sup>2</sup>	—	—	0	—	—	—	0	
PIA-3-65-04	DEAREATOR	0~1 kg/cm <sup>2</sup>	0.2 kg/cm <sup>2</sup>	—	—	0	—	—	—	0	TRANSMITTER, INDICATOR NEWLY INSTALLED
LIC-3-65-01	DEAREATOR	0~1200 mm	800 mm	25%	0	—	0	0	Δ	—	TRANSMITTER, CONTROLLER CHANGED

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TIC-3-65-01	10 <sup>K</sup> STEAM	0~250 °C	200°C	0%	-	0	0	x	Δ	-	CONTROLLER RENEWED TRANSMITTER NOT GOOD
TC-3-65-02	3 <sup>K</sup> STEAM	0~250 °C	150°C	ON, OFF	-	-	x	x	x	-	CONTROL VALVE OVERHAULED } TRANSMITTER OVERHAULED } / NOT GOOD
TIA-3-65-04	OUTLET PIPE	0~250 °C	170°C	-	-	0	-	-	-	0	
TIA-3-65-05	"	0~200 °C	140°C	-	-	0	-	-	-	0	
TR-3-65-03	30 <sup>K</sup> STEAM	0~600 °C	400°C	-	x	-	-	-	-	-	RECORDER NOT GOOD RECORDER AND COMPENSATE WIRE TO BE RENEWED

AIR SEPARATION PLANT

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FR-1	AIR INLET APPARATUS	0~40000 Nm <sup>3</sup> /H	29000 Nm <sup>3</sup> /H	—	0	—	—	0	—	—	RECORDER OVERHAULED / OK TRANSMITTER ZERO ADJUSTED / OK
FR-2	O <sub>2</sub> PRODUCT	0~5000 Nm <sup>3</sup> /H	3350 Nm <sup>3</sup> /H	—	0	—	—	0	—	—	
FR-3	N <sub>2</sub> PRODUCT	0~4000 Nm <sup>3</sup> /H	3100 Nm <sup>3</sup> /H	—	0	—	—	0	—	—	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
LRA-2	CONDENSATE TANK	0~2500 mm	2000 mm	-	0	1	1	0	1	0	
LIC-4	SPRAY COOLER CC	0~500 mm	260 mm	10%	-	0	0	0	0	-	CONTROL VALVE OVERHAULED / GOOD
LIC-7	EVAPORATION COOLER CE	0~1000 mm	560 mm	5%	-	0	0	0	0	-	CONTROL VALVE OVERHAULED / GOOD

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
P1-1	REGEN R1	0~10 kp/cm <sup>2</sup>	5.0 kp/cm <sup>2</sup>	—	—	0	—	—	—	—	
" -2	REGEN R2	"	5.0 kp/cm <sup>2</sup>	—	—	0	—	—	—	—	
" -3	REGEN R3	"	4.9 kp/cm <sup>2</sup>	—	—	0	—	—	—	—	
" -4	REGEN R4	"	4.9 kp/cm <sup>2</sup>	—	—	0	—	—	—	—	
" -5	PRESS. COL. C1	"	4.9 kp/cm <sup>2</sup>	—	—	0	—	—	—	—	
" -6	PRESS. COL. C2	0~1 kp/cm <sup>2</sup>	0.47 kp/cm <sup>2</sup>	—	—	0	—	—	—	—	
" -7	INLET TUBE AT1	0~10 kp/cm <sup>2</sup>	4.7 kp/cm <sup>2</sup>	—	—	0	—	—	—	—	
" -8	INLET TUBE AT2	"	0 kp/cm <sup>2</sup>	—	—	0	—	—	—	—	
" -11	O2-AFTER EVAP. AE	0~1600 mmWS	460 mmWS	—	—	0	—	—	—	—	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
PIA-14	OUTLET O <sub>2</sub> PUMP AP	0~4 kp/cm <sup>2</sup>	2.0 kp/cm <sup>2</sup>	—	—	0	—	—	—	0	
PI-15	AIR INLET APPARATUS	0~15 kp/cm <sup>2</sup>	5.0 kp/cm <sup>2</sup>	—	—	0	—	—	—	—	
" -16	N <sub>2</sub> PRODUCT	0~1600 mmWS	830 mmWS	—	—	0	—	—	—	—	
" -17	O <sub>2</sub> PRODUCT	"	350 mmWS	—	—	0	—	—	—	—	
PIC-8-21 -01	N <sub>2</sub> COMPER BY PASS	0~40 kg/cm <sup>2</sup>	20.5 kg/cm <sup>2</sup>	30%	—	0	0	0	0	—	THIS AUTOMATIC CONTROL SYSTEM NEWLY INSTALLED.



TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
HC-1	LIQUID O <sub>2</sub> AFTER E2	0~100%	-	75%	-	0	-	-	0	-	
HC-2	LIQUID N <sub>2</sub> AFTER E3	"	-	65%	-	0	-	-	0	-	
HC-3	EVAPORATOR	"	-	25%	-	0	-	-	0	-	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TI-1	REGEN R1	-200~+50 0~+200°C	-104 °C	0	0	-	-	0	-	
" -2	" R2	"	-106	0	0	-	-	0	-	
" -3	" R3	"	-107	0	0	-	-	0	-	
" -4	" R4	"	-108	0	0	-	-	0	-	
" -5	VALVE BOX V1	"	-170	0	0	-	-	0	-	
" -6	" V2	"	-167	0	0	-	-	0	-	
" -7	" V3	"	X	X	0	-	-	0	-	
" -8	" V4	"	-174	0	0	-	-	0	-	
" -9	AIR AFTER TUBE. COILS	"	-142	0	0	-	-	0	-	
" -10	AIR BEFORE TUBE. INES	"	-142	0	0	-	-	0	-	
" -11	AIR BEFORE TURB. AT1	"	-142	0	0	-	-	0	-	
" -12	AIR AFTER TURB. AT1	"	-147	0	0	-	-	0	-	
" -13	AIR BEFORE TURB. AT2	"	+25	0	0	-	-	0	-	
" -14	AIR AFTER TURB. AT2	"	+25	0	0	-	-	0	-	
" -15	O <sub>2</sub> EVAP. AE	"	+28	0	0	-	-	0	-	
" -16	LIQUID O <sub>2</sub> AFTER E2	"	-186	0	0	-	-	0	-	
" -17	IMPURE N <sub>2</sub> AFTER E2	"	-178	0	0	-	-	0	-	
" -18	IMPURE N <sub>2</sub> AFTER E1	"	-177	0	0	-	-	0	-	
" -19	PURE N <sub>2</sub> AFTER E3	"	-178	0	0	-	-	0	-	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TI-20	LIQUID N2 AFTER F3	-200~+50°C	-183°C	0	0	-	-	0	-	
" -21	AIR INLET APPARATUS	"	+27	0	0	-	-	0	-	
" -22	PURE N2 PRODUCT	"	+21	0	0	-	-	0	-	
" -23	PURE O2 PRODUCT	"	+29	0	0	-	-	0	-	
" -24	IMPURE N2 OUTLET	"	+28	0	0	-	-	0	-	
" -25	O2 AFTER EVAP. AE	"	+35	0	0	-	-	0	-	
" -26	HEATING OUTLET A2	"	+25	0	0	-	-	0	-	
" -27	HEATING OUTLET A1	"	+25	0	0	-	-	0	-	
" -28	BEARING TURB. AT1	"	+46	0	0	-	-	0	-	
" -29	"	"	+56	0	0	-	-	0	-	
" -30	BEARING TURB. AT2	"	+25	0	0	-	-	0	-	
" -31	"	"	+25	0	0	-	-	0	-	
TR-3/1	REGENERATOR 1 Mitte	-170~-50°C	-114°C	0	0	-	-	0	-	
" 2	REGENERATOR 2 Mitte	"	-123	0	0	-	-	0	-	
" 3	REGENERATOR 3 Mitte	"	-108	0	0	-	-	0	-	
" 4	REGENERATOR 4 Mitte	"	-110	0	0	-	-	0	-	
" 5	Luff aus REGENERATOR	"	-169	0	0	-	-	0	-	
" 6	Luff Vorden Turbinen	"	-167	0	0	-	-	0	-	

ADIP PLANT

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FRC-4-11-01	IN ABS ADIP	0~10x9 m <sup>3</sup> /H	45 m <sup>3</sup> /H	30%	Δ	—	0	0	0	—	
FRC-4-11-03	REBOILER	0~ 10x9 T/H	3.7 T/H	30%	Δ	—	0	0	0	—	CONTROL VALVE OVERHAULED / GOOD
FI-4-11-04	COOLING WATER	0~35 T/H	10 T/H	—	—	0	—	0	—	—	
PIA-4-11-15	INST AIR	0~10 kg/cm <sup>2</sup>	3.5 kg/cm <sup>2</sup>	—	—	0	—	—	—	0	
LIA-4-11-12	ABSORBER		x	—	—	x		x	—	x	
LICA-4-11-02	ABSORBER	0.2~ 1.0 K	0.6 kg/cm <sup>2</sup>		—	0	0	0	0	H x L	
LIA-4-11-03	REGENERATOR	0~100%	50%	—	—	0	—	—	—	H x L	
LA-4-11-01	SCRUBER		—	—	—	—	—	0	—	x	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TR-4-11-01 /1	ADIP SOLUTION	0~200°C	48°C	P+100 Δ	Δ	—	X	—	—	RECORDER TO BE RENEWED
2	SYNTHESIS GAS	"	65°C	Δ	Δ	0	X	—	—	PROTECTION TUBE INSPECTED / GOOD
3	ADIP SOLUTION	"	30°C	Δ	Δ	—	X	—	—	
4	"	"	47°C	Δ	Δ	—	X	—	—	
5	"	"	82	Δ	Δ	0	X	—	—	PROTECTION TUBE INSPECTED / GOOD
6	"	"	96	Δ	Δ	—	X	—	—	
7	REGENERATOR ACID GAS	"	72°C	Δ	Δ	0	X	—	—	PROTECTION TUBE INSPECTED / GOOD
8	ADIP SOLUTION	"	34	Δ	Δ	0	X	—	—	"
9	"	"	104	Δ	Δ	—	X	—	—	
10	STEAM	"	147°C	Δ	Δ	—	X	—	—	
11	SPARE	"	—	—	—	—	X	—	—	
12	"	"	—	—	—	—	X	—	—	

AMMONIA PLANT

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FR-3-29-01	GAS OUTLET CO-CONVERSION	0~25000 Nm <sup>3</sup> /H	18000 Nm <sup>3</sup> /H	—	0	—	—	0	—	—	
FRC-3-29-02	STEAM INLET CO-CONVERSION	0~9000 kg/H	6390 kg/H	25%	0	—	0	0	0	—	CONTROL VALVE OVERHAULED / GOOD
FI-3-29-03	HOT WATER TO SATURATOR	0~150 m <sup>3</sup> /H	105 m <sup>3</sup> /H	—	—	0	—	0	—	—	
FIC-3-29-04	CIRCULATING WATER TO DEMOISTURE	0~40 m <sup>3</sup> /H	29.6 m <sup>3</sup> /H	50%	—	0	0	0	0	—	CONTROL VALVE OVERHAULED / GOOD
FIC-3-29-05	WATER FROM TO SATURATOR TO DEMOISTURE	0~120 m <sup>3</sup> /H	81.6 m <sup>3</sup> /H	30%	—	0	0	0	0	—	CONTROLLER OVERHAULED / GOOD
FIC-3-29-06	WARM WATER TO DEMOISTURE	0~30 m <sup>3</sup> /H	13.5 m <sup>3</sup> /H	25%	—	0	0	0	0	—	
FR-3-31-01	GAS OUTLET CO <sub>2</sub> -REMOVAL	0~15000 Nm <sup>3</sup> /H	12900 Nm <sup>3</sup> /H	—	0	—	—	0	—	—	
FI-3-31-02	WATER TO SCRUBBER	0~2300 Nm <sup>3</sup> /H	1080 Nm <sup>3</sup> /H	—	—	0	—	0	—	—	CONTROL VALVE OVERHAULED / GOOD
FRC-3-31-03	N <sub>2</sub> TO CONVERTER GAS	0~3000 Nm <sup>3</sup> /H	2100 Nm <sup>3</sup> /H	50%	0	0	0	0	0	—	CONTROLLER and CONTROL VALVE INSTALED TRANSMITTER ( 3600 mmWS + 1.296 mmWS ) ΔP CHANGED ( 5000 Nm <sup>3</sup> /H → 3000Nm <sup>3</sup> /H )

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FR-3-43-01	SYN GAS QUANTITY	0~20000 Nm <sup>3</sup> /H	10600 Nm <sup>3</sup> /H	-	0	-	-	0	-	-	
FI-3-43-02	QUANTITY OF RETURN-GAS	0~1200 Nm <sup>3</sup> /H	0 Nm <sup>3</sup> /H	-	-	0	-	0	-	-	
FR-3-52-01	NH <sub>3</sub> CONV INLET	0~100000 Nm <sup>3</sup> /H	51000 Nm <sup>3</sup> /H	-	0	-	-	0	-	-	TRANSMITTER ΔP CHECKED / GOOD
FIA-3-52-01/B	"	0~26300 Nm <sup>3</sup> /H	OVER SCALE	-	-	0	-	0	-	0	LOW ANN TRANSMITTER ΔP CHECKED / GOOD
FR-3-52-03	OUTLET FLOW TAIL GAS SCRUBBER	0~1200 Nm <sup>3</sup> /H	672 Nm <sup>3</sup> /H	-	0	-	-	0	-	-	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
LICA-3-29-01	SATURATOR	0~1500 mm	1080 mm	20%	-	0	0	0	0	H O L	CHAMBER CLEANED / GOOD
LICA-3-29-02	DEMOISTURE	"	1020 mm	75%	-	0	0	0	0	H O L	CONTROL VALVE OVERHAULED / GOOD CHAMBER CLEANED / GOOD
LIA-3-29-04	TOP SATURATOR	0~1400 mm	1400 mm	-	-	0	-	0	-	H O L	
LICA-3-31-01	PRESSURE WATER SCRUBBER	0~1500 mm	1020 mm	25%	-	0	0	0	0	H O L	CHAMBER CLEANED / GOOD
LIA-3-31-02	"	0~1000 mm	1000 mm	-	-	0	-	0	-	H O L	
LIA-3-31-05	FLASH VESSEL	"	500 mm	-	-	0	-	0	-	H O L	
LICA-3-43-01	COPPER SOLUTION IN SCRUBBER	"	580 mm	75%	-	0	0	0	0	H O L	
LIA-3-43-02	"	"	590 mm	-	-	0	-	0	-	H O L	
LICA-3-43-03	NH <sub>3</sub> WATER IN SCRUBBER	"	560 mm	5%	-	0	0	0	0	H O L	



TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
LIA-3-43-04	NH <sub>3</sub> WATER IN SCRUBBER	0~1000 mm	580 mm	—	—	0	—	0	—	H O L	
LI-3-43-06	SURGE TANK	0~2250 mm	—	—	—	Δ	—	×	—	—	THERE IS NO TRANSMITTER
LICA-3-52-01	NH <sub>3</sub> SEPARATOR	0~1000 mm	580 mm	40%	—	0	0	0	0	H O L	CONTROL VALVE OVERHAULED / GOOD
LIA-3-52-02	"	"	660 mm	—	—	0	—	0	—	H O L	
LICA-3-52-03	NH <sub>3</sub> FLASH VESSEL	"	500 mm	75%	—	0	0	0	0	H O L	CONTROL VALVE OVERHAULED / GOOD
LICA-3-52-04	TAIL GAS SCRUBBER	"	250 mm	10%	—	0	0	0	0	H O L	
LICA-3-52-05	WASTE HEAT BOILER	0~750 mm	430 mm	25%	—	0	0	0	0	H O L	
LI-3-74-01	SYN GAS HOLDER	0~6000 m <sup>3</sup>	5100 m <sup>3</sup>	—	—	0	—	0	—	—	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
PR-3-29-02	GAS OUTLET CO-CONVERSION	0~40 kp/cm <sup>2</sup>	20 kp/cm <sup>2</sup>	—	0	—	—	0	—	—	
PR-3-29-08	STEAM INLET CO-CONVERSION	"	23 kp/cm <sup>2</sup>	—	0	—	—	0	—	—	
PaIA-3-31-02	PRESSURE WATER SCRUBBER	0~5000 mmws	1600 mmws	—	—	0	—	0	—	0 <sup>H</sup>	
PR-3-31-04	GAS OUTLET CO <sub>2</sub> -REMOVAL	0~40 kp/cm <sup>2</sup>	19.5 kp/cm <sup>2</sup>	—	0	—	—	0	—	—	
PRC-3-31-12	GAS FROM FLASH VESSEL	0~16 kp/cm <sup>2</sup>	7.7 kp/cm <sup>2</sup>	40%	0	—	—	0	—	—	CONTROL VALVE OVERHAULED / GOOD
PR-3-31-17	N <sub>2</sub> TO CONVERTER GAS	0~40 kp/cm <sup>2</sup>	19.5 kp/cm <sup>2</sup>	—	0	—	—	0	—	—	
PR-3-43-02	PRESSURE AFTER CUS SCRUBBER	0~160 kp/cm <sup>2</sup>	102 kp/cm <sup>2</sup>	—	—	0	—	0	—	—	
PI-3-43-04	PRESSURE AFTER RETURN GAS	0~630 mmws	410 mmws	—	—	0	—	0	—	—	
PI-3-52-02	SYN GAS INLET	0~630 kp/cm <sup>2</sup>	315 kp/cm <sup>2</sup>	—	—	0	—	0	—	—	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
PI-3-52-04	SYN GAS INLET	0~630 kp/cm <sup>2</sup>	315 kp/cm <sup>2</sup>	-	-	0	-	0	-	-	TRANSMITTER CHANGED TO NEW TYPE
PR-3-52-09	INLET CONVERTER	"	330 kp/cm <sup>2</sup>	-	0	-	-	0	-	-	TRANSMITTER CHANGED TO NEW TYPE
PI-3-52-11	PRESSURE IN FLASH VESSEL	0~63 kp/cm <sup>2</sup>	29 kp/cm <sup>2</sup>	-	-	0	-	0	-	-	
PRC-3-52-12	OUTLET TAIL GAS SCRUBBER	"	28.5 kp/cm <sup>2</sup>	15%	0	-	0	0	0	-	
PIA-3-52-14	Ins. T AIR	0~10 kp/cm <sup>2</sup>	3.5 kp/cm <sup>2</sup>	-	-	0	-	-	-	0 L	
TIC-3-29-04	GAS OUTLET HEAT EXCHANGER I	0~400 °C	240°C	100%	-	0	0	0	Δ	-	POWER CYLINDER TO BE CHANGED ( TWO SET )
TIC-3-43-02	INLET SURGE TANK	0~100 °C	75°C	50%	-	0	0	0	0	-	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
HIC-3-52-02	VENT BEFORE CIRCULATING SYSTEM	0~100%	—	100%	—	0	—	—	0	—	
" -03	INLET NH <sub>3</sub> CONVERTER	"	—	"	—	0	—	—	0	—	
" -04	FRESH GAS 1st STAGE	"	—	48%	—	0	—	—	0	—	
" -05	FRESH GAS 2nd STAGE	"	—	35%	—	0	—	—	0	—	
" -06	FRESH GAS 3rd STAGE	"	—	17%	—	0	—	—	0	—	
" -07	VENT IN CIRCULATING SYSTEM	"	—	0%	—	0	—	—	0	—	
" -08	BY PASS CONVERTER	"	—	0%	—	0	—	—	0	—	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
DR-3-43-01	DENSITY NH <sub>3</sub> WASHER	0.3~0.5 kp/Nm <sup>3</sup>	0.55 kp/Nm <sup>3</sup>	—	0	—	—	0	—	—	
DR-3-52-01	DENSITY NH <sub>3</sub> CONV	0.3~0.7 kp/Nm <sup>3</sup>	0.58 kp/Nm <sup>3</sup>	—	0	—	—	0	—	—	
ARA-3-29-01	OUTLET CO-CONVERSION	0~10% CO	1% CO	—	Δ	—	—	Δ	—	0 <sup>H</sup>	
AR-3-29-02	DRAIN WATER	3~9 PH	x	—	x	—	—	x	—	—	INSTRUMENT WAS MISSED
AR-3-31-01	OUTLET CO <sub>2</sub> REMOVAL	0~3 % CO <sub>2</sub>	x	—	x	—	—	x	—	—	"
ARA-3-43-01	SYN GAS	0~100 PPM CO <sub>2</sub>	28 PPM	—	0	—	—	0	—	0 <sup>H</sup>	
ARA-3-43-02	"	0~50 PPM CO + CO <sub>2</sub>	x	—	x	—	—	x	—	—	INSTRUMENT WAS MISSED
ARA-8-21-01	O <sub>2</sub>	0~100 PPM O <sub>2</sub>	30 PPM	—	0	—	—	0	—	0 <sup>H</sup>	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TR-3-29-01 /1	GAS OUTLET SATURATOR	0~600°C	164°C	0	△	—	0	—	—	ELEMENT CHANGED
" /2	I STAGE INLET CO-CONVERTER	"	351	0	△	—	0	—	—	"
" /3	I STAGE OUTLET CO-CONVERTER	"	481	0	△	0	0	—	—	PROTECTION TUBE INSPECTED / GOOD
" /4	II STAGE INLET CO-CONVERTER	"	350	0	△	—	0	—	—	"
" /5	II STAGE OUTLET CO-CONVERTER	"	381	0	△	—	0	—	—	"
" /6	GAS INLET WATER PREHEATER	"	350	0	△	—	0	—	—	"
" /7	GAS INLET DEMOISTURE	"	163	0	△	—	0	—	—	"
" /8	GAS OUTLET CO-CONVERSION	"	33	0	△	0	0	—	—	PROTECTION TUBE INSPECTED / GOOD
" /9	HOT WATER TO SATURATOR	"	172	0	△	—	0	—	—	"
" /10	STEAM INLET AFTER SEPARATOR	"	345	0	△	—	0	—	—	"
" /11	OUTLET CO2-REMOVAL	"	25	0	△	—	0	—	—	"
" /12	N2 TO CONVERTER GAS	"	28	0	△	—	0	—	—	"
TI-3-29-02 /1	GAS INLET SATURATOR	0~600°C	41°C	0	△	—	—	0	—	ELEMENT CHANGED
" /2	GAS AFTER STEAM SUPPLY	"	172	0	△	—	—	0	—	"
" /3	WATER INLET WATER PREHEATER	"	163	0	△	—	—	0	—	"
" /4	HOT WATER TO FEED WATER PLANT	"	153	0	△	—	—	0	—	"
" /5	HOT WATER FROM FEED WATER PLANT	"	67	0	△	—	—	0	—	"

TAG. NO.	SERVICE	RANGE	VALVE	OPERATION	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TI-3-29-02 /6	CIRCULATING WATER TO DEMOISTURE	0~600°C	41°C		0	Δ	-	-	0	-	ELEMENT CHANGED
" /7	WARM WATER TO DEMOISTURE	"	74		0	Δ	-	-	0	-	"
" /8	WATER TO DEMOISTURE	"	136		0	Δ	-	-	0	-	"
TI-3-43-01 /1	AFTER COPPER SOLUTION SCRUBBER	0~600°C	10°C		0	Δ	0	-	0	-	ELEMENT CHANGED, AND PROTECTION TUBE INSPECTED / GOOD
/2	OUTLET NH <sub>3</sub> WATER SCRUBBER	"	20		0	Δ	0	-	0	-	"
/3	AFTER RETURN GAS	"	28		0	Δ	-	-	0	-	
/4	OUTLET SUCTION TANK	"	15		0	Δ	0	-	0	-	" PROTECTION TUBE INSPECTED / GOOD
/5	AFTER REGENERATOR	"	26		0	Δ	-	-	0	-	"
/6	BEFORE HEATING PART	"	72		0	Δ	-	-	0	-	"
/7	AFTER UPPER PART	"	68		0	Δ	0	-	0	-	" PROTECTION TUBE INSPECTED / GOOD
/8	OUTLET REGENERATOR	"	80		0	Δ	-	-	0	-	"
/9	OUTLET SURGE TANK	"	75		0	Δ	-	-	0	-	"
/10	OUTLET WATER COOLER	"	28		0	Δ	0	-	0	-	" PROTECTION TUBE INSPECTED / GOOD
/11	OUTLET COOLING UNIT	"	10		0	Δ	-	-	0	-	"
TIC-3-29-04	GAS OUTLET HEAT EXCHANGE I	0~400°C	240°C		0	Δ	0	-	0	-	ELEMENT CHANGED, AND PROTECTION TUBE INSPECTED / GOOD
TIC-3-43-02	INLET SURGE TANK	0~100°C	75°C		0	Δ	0	-	0	-	"

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TR-3-52-01 / 1	INLET CONVERTER	0~600°C	23°C	0	△	-	0	-	-	
" 2	INLET 1st STAGE	"	400	0	△	-	0	-	-	
" 3	OUTLET 1st STAGE	"	465	0	△	-	0	-	-	
" 4	INLET 2nd STAGE	"	422	0	△	-	0	-	-	
" 5	OUTLET 2nd STAGE	"	472	0	△	-	0	-	-	
" 6	INLET 3rd STAGE	"	450	0	△	-	0	-	-	
" 7	OUTLET 3rd STAGE	"	479	0	△	-	0	-	-	
" 8	OUTLET CONVERTER	"	179	0	△	-	0	-	-	
" 9	OUTLET TAIL GAS	"	30	0	△	0	0	-	-	PROTECTION TUBE INSPECTIONED / GOOD
" 10	SPARE	"	-	-	-	-	0	-	-	
" 11	"	"	-	-	-	-	0	-	-	
" 12	"	"	-	-	-	-	0	-	-	



TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TI-3-52-02 /1	INLET CONVERTER	0~600°C	26°C	0	△	—	—	0	—	
"	INLET 1ST STAGE	"	386	0	△	—	—	0	—	
"	OUTLET 1ST STAGE	"	433	0	△	—	—	0	—	
"	INLET 2nd STAGE	"	430	0	△	—	—	0	—	
"	OUTLET 2nd STAGE	"	462	0	△	—	—	0	—	
"	INLET 3rd STAGE	"	451	0	△	—	—	0	—	
"	OUTLET 3rd STAGE	"	463	0	△	—	—	0	—	
"	OUTLET CONVERTER	"	124	0	△	—	—	0	—	
"	OUTLET BOILER	"	136	0	△	—	—	0	—	
"	OUTLET NH <sub>3</sub> SEPT	"	23	0	△	—	—	0	—	

UREA PLANT

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FRCA-3-57-02	NH <sub>3</sub> LIQUID	0~10 m <sup>3</sup> /H	6.3 m <sup>3</sup> /H	50 %	0	+	0	0	0	x	TRANSMITTER "AP" CHECKED / GOOD RECORDER OVERHAULED / GOOD ALARM UNIT TO BE RENEWED
FR-3-57-03	CO <sub>2</sub> -COMP IN LET	0~3500 Nm <sup>3</sup> /H	1600 Nm <sup>3</sup> /H	-	0	-	-	0	-	-	"U" TUBE and RECORDER OVERHAULED / GOOD POSITION CHANGE FOR TRANSMITTER OK TRANSMITTER "AP" CHECKED / GOOD
FR-3-57-07	NH <sub>3</sub> STORAGE TANK	0~2 m <sup>3</sup> /H	2 m <sup>3</sup> /H	-	0	-	-	0	-	-	TRANSMITTER OVERHAULED / GOOD RECORDER OVERHAULED / GOOD
FR-3-57-08	NH <sub>3</sub> SCRUBBER	0~0.2 m <sup>3</sup> /H	0.2 m <sup>3</sup> /H	65 %	0	-	0	0	0	-	TRANSMITTER } OVERHAULED / GOOD RECORDER } CONTROL VALVE OVERHAULED / GOOD
FR-2-81-01	UREA FILTER OUT	0~7x007 m <sup>3</sup> /H	2.66 m <sup>3</sup> /H	40 %	0	-	0	0	0	-	RECORDER OVERHAULED / GOOD

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
PRC-2-81-04	EVAPORATOR	0~0.7 kp/cm <sup>2</sup>	0.38 kp/cm <sup>2</sup>	100%	0	-	0	0	Δ	-	CONTROL VALVE } OVERHAULED / GOOD RECORDER
PRC-2-81-07	SEPARATOR 2nd	9~9x10 <sup>3</sup> mm H <sub>2</sub> O	7.2 kg/cm <sup>2</sup>	-	0	-	x	0	0	-	CONTROLLER NOT GOOD RECORDER OVERHAULED / GOOD
PRC-2-81-11		0~6 kg/cm <sup>2</sup>			-	-	Δ	Δ	Δ	-	LOCAL CONTROL
PRCA-3-57-05	NH <sub>3</sub> STORAGE TANK	0~40 kp/cm <sup>2</sup>	21 kp/cm <sup>2</sup>	15 %	0	-	0	0	0	0 <sup>L</sup>	RECORDER OVERHAULED / GOOD L ALARM CONTACT OVERHAULED / GOOD
PRC-3-57-12	LIQ NH <sub>3</sub> to FIRST REACTOR	0~400 kp/cm <sup>2</sup>	190 kp/cm <sup>2</sup>	65 %	0	-	0	0	0	-	TRANSMITTER } OVERHAULED / GOOD RECORDER
PRC-3-57-15	STEAM FIRST REACTOR	0~6 kp/cm <sup>2</sup>	4 kp/cm <sup>2</sup>	30 %	0	-	0	0	0	-	RECORDER OVERHAULED / GOOD
PRC-3-57-16	STEAM	0~6 kp/cm <sup>2</sup>	3 kp/cm <sup>2</sup>	0	0	-	0	0	0	-	TRANSMITTER } OVERHAULED / GOOD RECORDER
PRC-3-57-17	CONDENSATE 1ST REACTOR	0~400 kp/cm <sup>2</sup>	200 kp/cm <sup>2</sup>	10 %	-	-	0	0	0	-	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
PRC-3-57-25	CARBAMATE GAS	0~4 kp/cm <sup>2</sup>	2.05 kp/cm <sup>2</sup>	60 %	0	—	0	0	0	—	RECORDER OVERHAULED / GOOD
PICA-3-57-32	N <sub>2</sub> GAS TANK	0~40 kp/cm <sup>2</sup>	25 kp/cm <sup>2</sup>	0	—	0	0	0	0	H O L	H. L ALARM CHECKED / GOOD
PIA-3-57-38	INST AIR	0~10 kp/cm <sup>2</sup>	38 kp/cm <sup>2</sup>	—	—	0	—	0	—	0	
PIA-3-57-08	CO <sub>2</sub> -GAS to CO <sub>2</sub> -COMP.	0~63 kp/cm <sup>2</sup>		—	—	0	—	0	—	0	
PIA-3-57-56	COOLING WATER	0~10 kp/cm <sup>2</sup>	2 kp/cm <sup>2</sup>	—	—	0	—	0	—	0	
PIA-3-57-58	OIL COMP	0~6 kp/cm <sup>2</sup>	3 kp/cm <sup>2</sup>	—	—	0	—	0	—	0	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
LIA-3-57-01	NH <sub>3</sub> STORAGE TANK	0~100 mm	60 mm	0 %	—	0	0	0	0	0	CONTROL VALVE } OVERHAULED / GOOD INDICATOR } H.L ALARM CHECKED / GOOD
LICA-3-57-02	1st REACTOR	0~100 mm	30 mm	0 %	—	0	0	0	0	H O L	H.L ALARM CHECKED / GOOD
LIC-3-57-03	UREA SOLUTION 1st SEPOI	0~100 mm	42 mm	10 %	—	0	0	0	0	—	CONTROL VALVE OVERHAULED / GOOD
LICA-3-57-04	UREA SOLUTION 2nd SEPOI	0~100 mm	48 mm	0 %	—	0	0	0	0	—	CONTROL VALVE OVERHAULED / GOOD
LIC-3-57-05	WASHING COLUMN	0~100 mm	40 mm	20 %	—	0	0	0	0	—	
LICA-3-57-07	SEPARATION WATER TANK	0~100 mm	60 mm	10 %	—	0	0	0	0	H O L	CONTROL VALVE OVERHAULED / GOOD H.L ALARM CHECKED / GOOD
LICA-3-57-08	STEAM CONDENSATE TANK	0~100 mm	100 mm	75 %	—	0	X	0	0	H O L	TRANSMITTER } CHECKED / GOOD INDICATOR } H.L ALARM NEW WIRING
LICA-3-57-09	NH <sub>3</sub> CONDENSATE TANK	0~100 mm	53 mm	100 %	—	0	0	0	0	H O L	INDICATOR OVERHAULED / GOOD H.L ALARM CHECKED / GOOD

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
LIA-2-81-01	UREA STORAGE TANK	0~100 mm	45 mm	-	-	0	-	0	-	H O L	INDICATOR CHECKED / GOOD H.L ALARM CHECKED / GOOD
LI-2-81-02	UREA MALTING	0~100 mm	0	-	-	0	-	X	-	-	
LIA-2-81-04	UREA TOWER TOP	0~100 mm	0	-	-	0	-	0	-	O L	
LIA-3-52-	NH <sub>3</sub> SYNTHESIS	0~100 mm	0	-	-	0	-	0	-	H O L	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
TRC-3-57-06	UREA SOLUTION 1st	0~200 °C	93 °C	15%	0	—	0	0	0	—	RECORDER OVERHAULED / GOOD TRANSDUCER CHECKED / GOOD
TRC-3-57-	UREA SOLUTION 2nd	0~150 °C	72 °C	100%	0	—	Δ	0	0	—	RECORDER OVERHAULED AND TRANSDUCER CHECKED / GOOD
TRC-3-57-10	WASHING COLUMN	0~150 °C	80 °C	75%	0	—	0	0	0	—	CONTROL VALVE } RECORDER } OVERHAULED / GOOD TRANSDUCER }
TRC-2-81-05	SEPARATOR	50~150 °C	111 °C	75%	0	—	0	0	0	—	CONTROL VALVE } RECORDER } OVERHAULED / GOOD TRANSDUCER }
TRC-2-81-07	STRAGE TANK	50~150 °C	130 °C	75%	0	—	0	0	0	—	CONTROL VALVE } RECORDER } OVERHAULED / GOOD TRANSDUCER }
TIC-2-81-10	UREA MALT	0~150 °C	73 °C	0	0	—	0	0	0	—	TRANSDUCER CHECKED / GOOD
TRC-3-57-02											CONTROL VALVE OVERHAULED / GOOD TRANSDUCER "
ARA-3-57-01	CO <sub>2</sub> -C INLET	0~1%	0.8%	—	—	×	Δ	—	Δ	×	RECORDER NOT GOOD } INDICATOR " } TO BE RENEWED ALARM " }

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TR-3-44B-01 / 1	CO <sub>2</sub> -GAS DRYING	0-200 °C	X	X	X	Δ	X	-	-	
2	"	"	X	X	X	Δ	X	-	-	
3	"	"	X	X	X	Δ	X	-	-	
4	"	"	X	X	X	Δ	X	-	-	
5	"	"	X	X	X	Δ	X	-	-	
6	"	"	X	X	X	Δ	X	-	-	
7	"	"	X	X	X	Δ	X	-	-	
8	"	"	X	X	X	Δ	X	-	-	
9	"	"	X	X	X	Δ	X	-	-	
10	"	"	X	X	X	Δ	X	-	-	
11	"	"	X	X	X	Δ	X	-	-	
12	"	"	X	X	X	Δ	X	-	-	



TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TR-3-57-05/1	1st REACTOR BOTTOM	0~250°C	72	Δ	Δ		X	—	—	
/2	"	"	113	Δ	Δ		X	—	—	
/3	1st REACTOR UPPER	"	—	Δ	Δ		X	—	—	
/4	2nd REACTOR INLET	"	172	Δ	Δ		X	—	—	
/5	" OUTLET	"	187	○	Δ	Δ	X	—	—	
/6	WASHING COLUMN IN	"	110	Δ	Δ		X	—	—	
/7	" BOTTOM	"	57	Δ	Δ		X	—	—	
/8	" UPPER	"	159	Δ	Δ		X	—	—	
/9	" OUTLET	"	50	Δ	Δ		X	—	—	
/10	UREA MALTING PUMP OUTLET	"		○	Δ		X	—	—	
/11	TR-3-57-05/5	"		Δ	Δ		X	—	—	
/12	TR-3-57-05/10	"		○	Δ		X	—	—	



AMMONIA SULPHATE PLANT

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FR-2-51-01	CARBAMATE GAS	0~6000 kg/H	X	-	X	-	-	X	-	-	INSTRUMENT MISSED
FI-2-51-02	INLET SATURATOR	0~3000 kg/H	X	-	-	-	-	X	-	-	INSTRUMENT MISSED
" -03	"	"	X	-	-	-	-	X	-	-	INSTRUMENT MISSED
KrL-2-51-04	NH <sub>3</sub> WATER	0.3~3 m <sup>3</sup> /H	0	-	-	-	-	0	-	-	
" -05	"	"	X	-	-	-	-	X	-	-	INSTRUMENT MISSED
FR-2-51-06	SATURATOR STEAM	0~2000 kg/H	760	-	0	-	-	0	-	-	
FI-2-51-07	"	0~1000 kg/H	450	-	-	-	-	0	-	-	
" -08	"	"	0	-	-	-	-	0	-	-	
FrL-2-51-09	HOT WATER	0.3~3 m <sup>3</sup> /H	0.5	-	-	-	-	0	-	-	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FYL-2-51-10	HOT WATER	0.3~3 m <sup>3</sup> /H	0 m <sup>3</sup> /H	-	-	-	-	0	-	-	
FYR-2-51-11	H <sub>2</sub> SO <sub>4</sub> 98%	0.5~5 m <sup>3</sup> /H	2 m <sup>3</sup> /H	-	0	-	-	0	-	-	
FYL-2-51-12	"	0.25~ 2.5 m <sup>3</sup> /H	x	-	-	-	-	x	-	-	INSTRUMENT MISSED
" -13	"	"	x	-	-	-	-	x	-	-	INSTRUMENT MISSED
FR-2-51-14	NH <sub>3</sub> WATER	0~6000 kg/H	0 kg/H	-	0	-	-	0	-	-	
FR-2-51-15	NH <sub>3</sub> GAS	0~3500 kg/H	x	-	x	-	-	0	-	-	RECORDER MISSED
FR-2-51-16	PROCESS WATER	0~10 m <sup>3</sup> /H	7.1 m <sup>3</sup> /H	-	0	-	-	0	-	-	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
PIA-2-51-01	NH <sub>3</sub> GAS	0~16 kp/cm <sup>2</sup>	x	-	-	x	-	Δ	-	x	INSTRUMENT MISSED
PRC-2-51-02	"	0~6 kp/cm <sup>2</sup>	x	x	x	-	x	Δ	x	-	INSTRUMENT, CONTROLLER NOT GOOD
PRA-2-51-04	CARBAMATE GAS	"	0 kp/cm <sup>2</sup>	-	Δ	Δ	-	Δ	-	x	
PRA-2-51-06	SATURATOR STEAM	0~16 kp/cm <sup>2</sup>	5 kp/cm <sup>2</sup>	-	0	Δ	-	Δ	-	x	
PRCA-2-51-09	COOLING WATER	"	3.5 kp/cm <sup>2</sup>	100%	Δ	Δ	x	Δ	0	x	CONTROL VALVE OVERHAULED / GOOD CONTROLLER OVERHAULED / GOOD
PIA-2-51-10	INST AIR	0~10 kp/cm <sup>2</sup>	3.5	-	-	0	-	-	-	x	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
LIA-2-51-0	H <sub>2</sub> SO <sub>4</sub> HEAD TANK	0~1800 mm	x	—	—	—	—	x	—	x	INSTRUMENT MISSED
LICA-2-51-02	NH <sub>3</sub> EVAPORATOR	0~750 mm	490 mm	250 mm	—	Δ	0	0	0	x	CONTROL VALVE OVERHAULED / CONTROL VALVE TO BE RENEWED
LIA-2-51-03	"	0~500 mm	x	—	—	—	—	x	—	x	INSTRUMENT MISSED
LIA-2-51-08	LYE-TANK	0~2900 mm	x	—	—	—	—	x	—	x	INSTRUMENT MISSED
LI-2-51-10	SULPHURIC ACID TANK	0~1200 mm	x	—	—	Δ	—	x	—	x	TRANSMITTER NOT GOOD
TIC-2-51-09	NH <sub>3</sub> SUPER HEATER	-10~0~ ~+50 °C	25 °C	90 %	—	Δ	x	—	Δ	—	PROTECTION TUBE TO BE CHANGED CONTROL VALVE OVERHAULED / GOOD

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TR-2-51-01/1	CARBAMATE GAS	0~200°C	52°C	Δ	Δ	—	0	—	—	
"	STEAM	"	153.5	Δ	Δ	—	0	—	—	
"	NH <sub>3</sub> GAS	"	63	Δ	Δ	—	0	—	—	
"	H <sub>2</sub> SO <sub>4</sub> 98%	"	34	Δ	Δ	Δ	0	—	—	PROTECTION TUBE TO BE RENEWED
"	SPARE	"	—	—	—	—	—	—	—	
"	"	"	—	—	—	—	—	—	—	
"	"	"	—	—	—	—	—	—	—	
"	"	"	—	—	—	—	—	—	—	
"	"	"	—	—	—	—	—	—	—	
"	"	"	—	—	—	—	—	—	—	
"	"	"	—	—	—	—	—	—	—	
"	"	"	—	—	—	—	—	—	—	
"	"	"	—	—	—	—	—	—	—	
TI-2-51-06/1	OUTLET LYE TANK	0~150°C	X	X	X	X	—	X	—	INSTRUMENT MISSED
"	AT DRYER HEATING ZONE	"	X	X	X	X	—	X	—	
"	AT DRYER COOLING ZONE	"	X	X	X	X	—	X	—	
"	AT TANK FOR SPRAYING AGENT	"	X	X	X	X	—	X	—	

H<sub>2</sub>SO<sub>4</sub> PLANT

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FR-861-1	DRYING TOWER OUT	0~26000 Nm <sup>3</sup> /h	X	—	X	—	—	X	—	—	
FI-868-1	INLET FURNACE	0~18000 Nm <sup>3</sup> /H	X	—	—	Δ	—	X	—	—	
TR-868-3-3	30K STEAM	250~500 °C	X	—	X	—	—	Δ	—	—	RECORDER TO BE CHANGED
FR-868-3-2	"	0~10 T/H	X	—	X	—	—	Δ	—	—	
PR-868-3-6	"	0~40 kg/cm <sup>2</sup>	X	—	X	—	—	X	—	—	
LRC-861-1	STEAM DRUM	0~400 mm	72 mm	65 %	0	—	0	Δ	0	—	CONTROLLER OVERHAULED CONTROL VALVE CHANGED TRANSMITTER TO BE RENEWED ITER
DR-861-2	H <sub>2</sub> SO <sub>4</sub>	94~98.5 %	97 %	—	Δ	—	—	Δ	—	—	
DR-861-3	H <sub>2</sub> SO <sub>4</sub>	96.5~ 98.5%	99.2 %	—	Δ	—	—	Δ	—	—	



TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TI-861-1/1	BEFORE CONVERTER	0~900 °C	280 °C	0	△	0	—	0	—	PROTECTION TUBE INSPECTIONED / GOOD
2	BEFORE I RAY		402	0	△	0	—	0	—	PROTECTION TUBE INSPECTIONED / GOOD
3	I RAY		400	0	△	—	—	0	—	
4	OUTLET I RAY		570	0	△	—	—	0	—	
5	INLET II RAY		492	0	0	0	—	0	—	COMPENSATE WIRE CHANGED PROTECTION TUBE CHANGED
6	OUTLET II RAY		550	0	△	—	—	0	—	
7	INLET III RAY		410	0	△	0	—	0	—	PROTECTION TUBE INSPECTIONED / GOOD
8	OUTLET III RAY		410	0	△	—	—	0	—	
9	INLET IV RAY		392	0	△	—	—	0	—	
10	IV RAY		420	0	△	0	—	0	—	PROTECTION TUBE INSPECTIONED / GOOD
11	IV RAY		505	0	△	0	—	0	—	PROTECTION TUBE INSPECTIONED / GOOD
12	OUTLET III RAY		460	0	△	—	—	0	—	
13	AIR PREHEATER		160	0	△	—	—	0	—	
14	INTERMEDIATE COOLER		50	0	△	—	—	0	—	
15	"		270	0	△	—	—	0	—	
16	AIR PREHEATER		375	0	△	—	—	0	—	
17	ECO INLET		370	0	△	—	—	0	—	
18	ECO OUTLET		170	0	△	—	—	0	—	
19	STEAM		330	0	△	—	—	0	—	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TR-861-2.1	BEFORE CONVERTER	0~700°C	385°C	0	△	-	△	-	-	RECORDER OVERHAULED / TO BE RENEWED
"	BEFORE I RAY	"	400	0	△	-	△	-	-	
"	INLET II RAY	"	415	0	△	-	△	-	-	
"	OUTLET II RAY	"	495	0	△	-	△	-	-	
"	INLET III RAY	"	455	0	△	-	△	-	-	
"	IV RAY	"	445	0	△	-	△	-	-	
TR-868-2.1	OUTLET ECONOMIZER	0~600°C	209°C	0	△	-	△	-	-	RECORDER OVERHAULED / TO BE RENEWED
"	OUTLET FURNACE	50~1600°C	900	0	△	-	△	-	-	

EGAT BOILER

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
FI-	COMB AIR	0~100 %	25 %	-	-	0	-	0	-	-	
FI-	COAL RATE	0~100 %	18 %	-	-	0	-	0	-	-	
FI-	HP STEAM FLOW	0~40 T/H	x	-	-	x	-	x	-	-	
FI-	F.W FLOW	0~50 T/H	8 T/H	-	-	0	-	0	-	-	
FI-	STEAM TO FERTIZER PLANT	0~15 T/H	12 T/H	-	-	0	-	0	-	-	
LIA-	STEAM DRUM	-18~0 ~+22 mm	±0 mm	-	-	0	x	0	0	0 H.L	

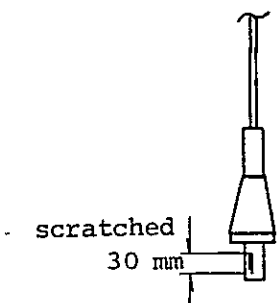
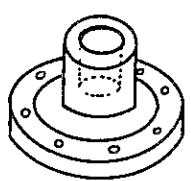
TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
PI-	FD AIR PREHEATER IN	0~250 mmWG	30 mmWG	-	-	0	-	0	-	-	
PI-	FD AIR PREHEATER OUT	"	20 mmWG	-	-	0	-	0	-	-	
PI-	FLUE GAS ECO IN	0~200 mmWG	25 mmWG	-	-	0	-	0	-	-	
PI-	FLUE GAS ECO OUT	"	12 mmWG	-	-	0	-	0	-	-	
PI-	FLUE GAS PREHEATER OUT	"	0 mmWG	-	-	0	-	Δ	-	-	
PI-	STORAGE TANK I	0~40 CM.WG	13 CM.WG	-	-	0	-	0	-	-	
PI-	STORAGE TANK II	"	"	-	-	0	-	0	-	-	
PI-	SEC AIR	0~1000 mmWG	0 mmWG	-	-	Δ	-	Δ	-	-	
PI-	FD AIR	0~250 mmWG	20 mmWG	-	-	0	-	0	-	-	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
PI-	HP STEAM	0~100 kg/cm <sup>2</sup>	40 kg/cm <sup>2</sup>	-	-	0	-	0	-	-	
PI-	FURNACE DRAFT	-10~0 ~+5 mmWG	-3 mmWG	-	-	0	-	0	-	-	
PGA	STEAM	0~100 kg/cm <sup>2</sup>	40 kg/cm <sup>2</sup>	-	-	0	-	0	-	-	
PG	FEED WATER	"	63 kg/cm <sup>2</sup>	-	-	0	-	0	-	-	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	ELEMENT	COMPENSATE WIRE	PROTECTION TUBE	RECORDER	INDICATOR	ALARM	REMARKS
TI-	ED ECO IN	0~300°C	90°C	0	0	-	-	0	-	
TI-	FD AIR PREHEATER OUT	"	104	0	0	0	-	0	-	PROTECTION TUBE INSPECTIONED / GOOD
TI-	FW FCO OUT	"	240	0	0	-	-	0	-	
TI-	DESUPER HEATER IN	200~550°C	330°C	0	0	-	-	0	-	
TI-	DESUPER HEATER OUT	"	460°C	0	0	-	-	0	-	
TI-	FLUE GAS ECO IN	0~700°C	230°C	0	0	-	-	0	-	
TI-	FLUE GAS ECO OUT	"	280	0	0	-	-	0	-	
TI-	FLUE GAS PREHEATER OUT	"	520	0	0	0	-	0	-	PROTECTION TUBE INSPECTIONED / GOOD
TI	SUPER HEATER OUTLET	200~500°C	435°C	0	0	-	-	0	-	

TAG. NO.	SERVICE	RANGE	OPERATION VALVE	CONTROLLER OUTPUT	RECORDER	INDICATOR	CONTROLLER	TRANSMITTER	CONTROL VALVE	ALARM	REMARKS
CO <sub>2</sub>	INSIDE FURNACE	0 ~ 20 %	X	—	—	X	—	X	—	—	
CO + H <sub>2</sub>	"	0 ~ 20 %	X	—	—	X	—	X	—	—	

FCV-3-29-02 (AMMONIA PLANT STEAM)

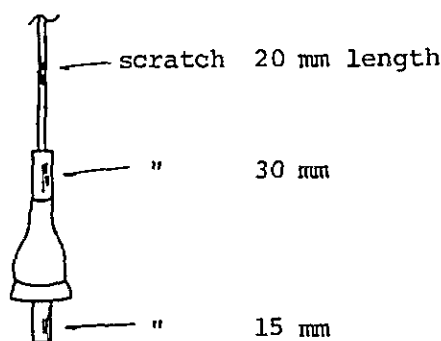
SPECIFICATION	VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION FLOW TEMP/ $\Delta$ P	Single seat 40 K 80 A COMPLETE CONE/PARABOLIC Equal % 65 Spring close max. 6.8 t/H, standard 5.94 t/H 350°C/3.5 kg/cm <sup>2</sup> G
INSPEC RESULT	TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING	Water 60 kg/cm <sup>2</sup> , 15 min Good Air 1 kg/cm <sup>2</sup> , 9.6 l/min Good Full stroke Good OK Changed, OK "
REMARKS	<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  </div> <div style="flex: 2;"> <p>became slender about 0.5 mm</p> </div> </div> <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  </div> <div style="flex: 2;"> <p>The lower cover of guide bush had been damaged and it was newly prepared and changed.</p> <p style="margin-left: 40px;">34 <math>\phi</math></p> <p style="margin-left: 40px;">25 <math>\phi</math></p> <p style="margin-left: 40px;">20 mm</p> <p>* Valve plug &amp; Seat ring should be replaced.</p> </div> </div>	



FRC-3-29-02 (AMMONIA PLANT)

SPECIFICATION	VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION	Single seat 350°C/29 K 80 Complete cone/parabolic Equal % 65 Spring close
INSPEC RESULT	TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING	
REMARKS		

PCV-3-31-2 (AMMONIA PLANT FLASH VESSEL)

SPECIFICATION	VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION	Single seat 40 K  PARABOLIC Eq % MAX CV:20 NOR.OPERATION CV: 11.6 AIR to OPEN
INSPEC RESULT	TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING	WATER 60 K, 15 min. Good Air 2K, 0.35 l/min. Good Full stroke Good OK Changed OK "
REMARKS	 <p>scratch 20 mm length</p> <p>" 30 mm</p> <p>" 15 mm</p>	

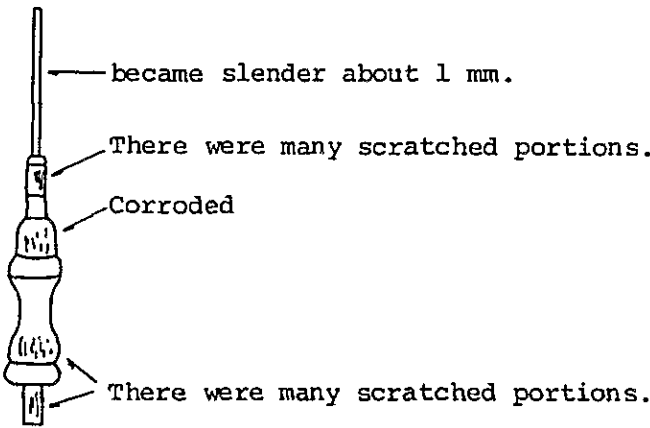
LCV-3-52-01 (AMMONIA SEPARATOR)

SPECIFICATION	VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION BODY MATERIAL	Angle 500 K 24 PARABOLIC LINEAR 1.33 AIR to OPEN WN 4580/VA
INSPEC RESULT	TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING	WATER 600 kg/cm <sup>2</sup> , 15 min. Good AIR 4 kg/cm <sup>2</sup> , 0.8 l/min. Good Full stroke Good OK Change OK "
REMARKS	VALVE PLUG & SEAT RING changed	

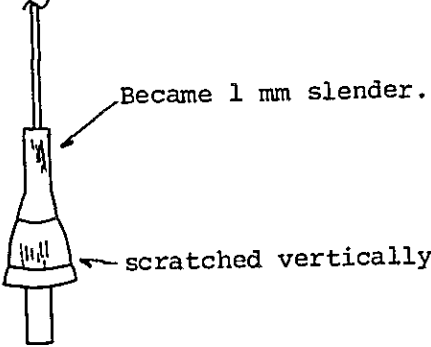
LCV-3-29-02 (AMMONIA DEMOISTURE WATER)

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">SPECIFICATION</p>	<p>VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION SERVO MOTOR</p>	<p>Double seat 40 K  PARABOLIC LINEAR max Cv 310, NOR OPERATION Cv 230.6 AIR to OPEN A300</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">INSPEC RESULT</p>	<p>TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING</p>	<p>Water 60 kg/cm<sup>2</sup>, 15 Good Water 4 kg/cm<sup>2</sup>, 0 l/min Good Full stroke OK OK Changed OK "</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">REMARKS</p>		

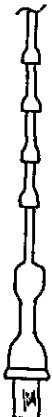
PCV-3-65-03 (FEED WATER MEDIUM STEAM)

SPECIFICATION	VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION	Double seat 16 80 PARABOLIC Eq 8 KV 76 AIR to OPEN
INSPEC RESULT	TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING	Water 24 kg/cm <sup>2</sup> , 15 min Good Water 4 kg/cm <sup>2</sup> , 5.4 l/min. Good Full stroke OK OK Changed OK "
REMARKS	VALVE STEAM & PLUG are recommendable to be changed within 2 years.  	


PCV-3-65-02 (FEED WATER MEDIUM STEAM)

SPECIFICATION	VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION MAX FLOW	Single seat 40 50 PARABOLIC Eq % KV: 40 AIR to OPEN 11 t/H
INSPEC RESULT	TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING	Water 60 kg/cm <sup>2</sup> , 15 min Good AIR 2 kg/cm <sup>2</sup> , 4.2 l/min Good Full stroke good OK Changed OK "
REMARKS	Valve stem to be changed next occasion. Valve plug and seat ring were finished by the machining. Body inside has a hole by corrosion and seat ring damaged by the leakage. The troubles have been repaired by welding, yet it is recommendable to replace within 2 years.	
		

TCV-3-65-01 (FEED WATER INJECTION WATER)

SPECIFICATION	VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION	40 K
INSPEC RESULT	TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING	Water 60 kg/cm <sup>2</sup> , 15 min. Good - Full stroke OK OK Changed OK "
REMARKS	<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  <p style="margin-left: 20px;">← a little scratched</p> <p>valve plug</p> </div> <div style="flex: 2; padding-left: 20px;"> <p>Valve plug and Seat ring good</p> <p>Valve plug double seat face OK</p> </div> </div>	

TCV-3-65-02 (FEED WATER INJECTION WATER)

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">SPECIFICATION</p>	<p>VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION</p>	<p>20 K</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">INSPC RESULT</p>	<p>TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING</p>	<p>Water 30 kg/cm<sup>2</sup>, 15 min. Good - Full stroke OK OK Change OK "</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">REMARKS</p>	<div style="text-align: center;">  <p>valve plug</p> </div>	

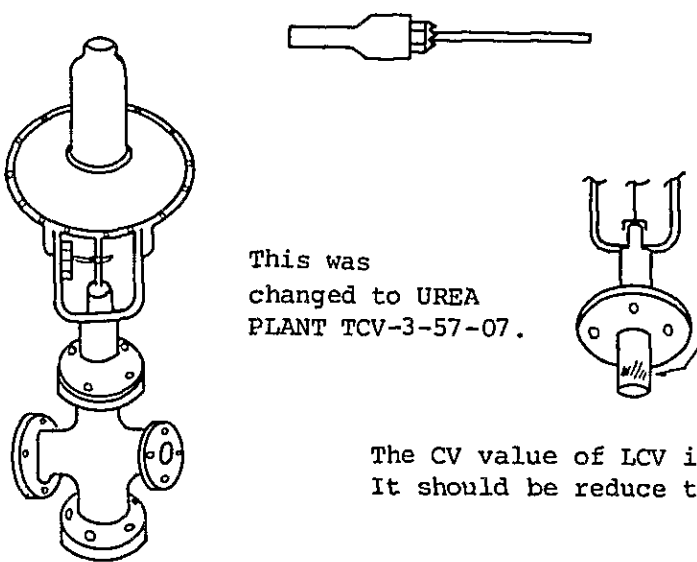


LCV-5 (GASIFICATION STEAM DRUM)

SPECIFICATION	VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION FLOW $P_1, P_2$	Single seat  32 (1 1/2")  Eq %  $Q \text{ max } 42 \text{ m}^3/\text{H}, Q \text{ normal } 8 \text{ m}^3/\text{H}$ 33.5 K, 12 K min.
INSPEC RESULT	TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING	Water $60 \text{ kg/cm}^2$ , 15 min. Good AIR $2 \text{ kg/cm}^2$ , 1 l/min. Good Full stroke OK OK Changed OK "

REMARKS

Connections of Valve plug and Stem were loosened and had been repaired.



This was changed to UREA PLANT TCV-3-57-07.

Here was corroded, the damaged one was used in Urea plant and it is better to be renewed.

The CV value of LCV is too large. It should be reduce to size of 1/3.

FCV-4-11-03 (ADIP OUTLET CONDENSATE REBOILER)

SPECIFICATION	VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION	Single seat 10 25 PARABOLIC Eq % 13 AIR to OPEN
INSPC RESULT	TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING	Water 15 kg/cm <sup>2</sup> , 15 min. Good AIR 4 kg/cm <sup>2</sup> , 0 l/min. Good Full stroke OK OK Changed OK "
REMARKS	VALVE PLUG and Seat ring were finished.	

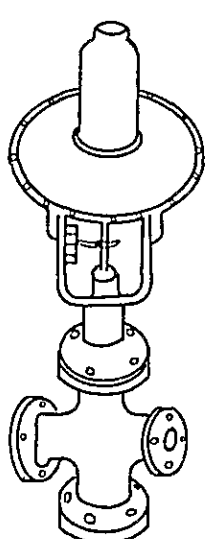
LCV-4 (AIR SEPARATION)

SPECIFICATION	VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION	
INSPEC RESULT	TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING	Water 15 kg/cm <sup>2</sup> , 15 min. Good  Full stroke Good  OK  Change OK  "
REMARKS	Good condition	

LCV-7 (AIR SEPARATION)

SPECIFICATION	VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION	
INSPEC RESULT	TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING	Water 10 kg/cm <sup>2</sup> , 15 min Good  Full stroke OK  OK  Change OK  "
REMARKS	Good condition	

LCV-861-1 (H<sub>2</sub>SO<sub>4</sub> PLANT STEAM DRUM)

SPECIFICATION	VALVE TYPE RATING SIZE TYPE OF PLUG CHARACTERISTIC CV VALVE ACTION	2B     KV: 20
INSPEC RESULT	TIGHT TEST LEKAGE TEST VALVE TRAVEL PAINTING OF BODY GLAND PACKING SEAT PACKING	Water 60 kg/cm <sup>2</sup> , 15 min. Good AIR 2 kg/cm <sup>2</sup> , 0.6 l/min. Good Full stroke Good OK Change OK "
REMARKS		<p>The spare actuator of Ammonia FIC-3-65-03 was converted to this, because of the old actuator had not enough power to close the valve when the water pressure was over 40<sup>K</sup>.</p> <p>The body was change to new spare part, which was made in Bangkok.</p> <p>KV value of 20 is too large for this valve.</p> <p>Valve plug was machine and lapped to the seat.</p>

GASIFICATION, FEED WATER, ADIP PLANT CONTROL VALVE O.H SCHEDULE

DATE		JUL												DATE	TIGHT TEST				LEAKAGE TEST		TEST DATA (%)															
		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	RATING	TIGHT TEST	LEAKAGE TEST	0	25	50	75	100									
NO	ITEM	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28																	
1	LCV-5 (Gasification drum)					■														ND25/40	60 kg/cm <sup>2</sup> 1/12"	AIR 2K 1 l/min.	0	25	50	75	100									
2	PCV-3-65-02 (Feed water)						■	■				■							ND25/40	60 "	AIR 2K 4.2 l/min.	0	25	50	75	100										
3	PCV-3-65-03 (Feed water)						■	■											ND25/40	24 "	WATER 4K 5.4 l/min.	0	25	50	75	100										
4	TCV-3-65-01 (Feed water)							■	■										ND40	60 "	AIR 2K 3 l/min.	0	25	50	75	100										
5	TCV-3-65-02 (Feed water)							■	■				■							30 "	WATER 4K 8.2 l/min.	0	25	50	75	100										
6	FCV-4-11-03 (Adip)																■		1.21654.4/3 25/53693 GS4571 E25 P13G	15 "	AIR 4K 0 l/min.	0	25	50	75	100										

AMMONIA PLANT VALVE OVERHAUL SCHEDULE

NO	ITEM	DATE	JUL																															RATING kg/cm <sup>2</sup> G	TIGHT TEST kg/cm <sup>2</sup> G	LEAKAGE TEST l/min.	VALVE LIFT TEST DATA			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	0%	25%	50%				75%	100%		
8	FCV-3-29-04 (HOT WATER)																																		0	25	50	75	100	
9	PCV-3-31-12 (FLASH VESSEL)																																		0	25	50	75	100	
10	LCV-3-29-02 (DEMOISTURE)																																	0	25	50	75	100		
11	LCV-3-52-01 (NH <sub>3</sub> SEPARATOR)																																	0	25	50	75	100		
12	FIC-3-29-02																																	0	25	50	75	100		



AMMONIUM SULPHATE PLANT VALVE OVERHAUL SCHEDULE

DATE		JUL														DATE		LEAKAGE TEST	VALVE LIFT TEST DATA									
NO	ITEM	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	RATING	TIGHT TEST	LEAKAGE TEST	0%	25%	50%	75%	100%	
																kg/cm <sup>2</sup> G	kg/cm <sup>2</sup> G	l/min										
	[H <sub>2</sub> SO <sub>4</sub> PLANT]																											
13	LCV-861-1 (STEAM DRUM)																			40	60	Air 2K 0.6	0	25	50	75	100	
	[A S PLANT]																											
14	PCV-2-51-09 (COOLING WATER)																			10	15	Water 4K 8	0	25	50	75	100	
15	LCV-2-51-02 (EVAPORATOR)																			40	60	Air 4K 0.5	0	25	50	75	100	
16	TCV-2-51-09 (NH <sub>3</sub> SUPER HEATER)																			16	24	Air 2K 0.18	0	25	50	75	100	



GASIFICATION PLANT THERMO RECORDER OVERHAUL SCHEDULE

NO	ITEM	DATE	JUL																															RANGE	ELEMENT	TEST DATA	REMARKS									
			11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28																										
																					0	50	100	150	200	300	400	500	600																	
1	TRA-1		█																																							50 ~ 700°C	NiCr-Ni	50 200 400 500 600 (50) (150) (400) (510) (630)		
2	TR-2			█																																						0 ~ 200°C	Pt100Ω	0 50 100 150 200°C (1) (60) (120) (173) ( )		
3	TRA-3																																													
4	TR-20													█	█																											0 ~ 150°C	Pt100Ω	0 50 100 150°C (0) (47) (101) (153)	Pointing of recorder was not clear.	
5	TR-23														█																											50 ~ 1600°C	PR	50 400 800 1200 1600°C (50) (420) (900) (1340) ( )		
6	TR-24																																										0 ~ 100°C	Pt100Ω	0 20 50 70 90°C (2) (21) (51) (71) (91)	GAIN NO GOOD
7	TI-23-1																																									0 ~ 1600°C	PR	0 400 800 1200 1600°C (0) (400) (790) (1170) (1540)		
8	TI-7																																										50 ~ 1200°C	NiCr-Ni	50 300 600 900 1200 (50) (300) (600) (900) (1200)	GOOD

ADIP  
SULFURIC ACID PLANT THERMO RECORDER OVERHAUL SCHEDULE

NO	ITEM	DATE	DATE																												RANGE	ELEMENT	TEST DATA	REMARKS					
			JUL																																				
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28									
9	TR-868-3-3																														250~500°C		250 300 350 400 450 500 ( ) ( ) ( ) ( ) ( ) ( )						
10	TR-868-1 ~ 4																																50~600°C	I.C	50 150 300 450 600 ( / ) (140) (300) (432) ( / )				
	" -5,6																																50~1600°C	PR	50 400 800 1200 1600 ( / ) (370) (800) (1200) ( / )				
11	TR-861-2/1 ~ 6																															0~700°C	I.C						
12	TR-411-01 (Adip)																																0~200°C	Pt100Ω	0 50 100 150 200°C (4) (50) (100) (150) (200)				

AMMONIA PLANT CONTROLLER O.H SCHEDULE

NO	ITEM	DATE	JUL							RANGE	PID Set	ACTION	TEST DATA	REMARKS	
			11	12	13	14	15	16	17						18
1	FIC-3-29-05														

GASIFICATION PLANT CONTROLLER OVERHAUL SCHEDULE

NO	ITEM	DATE	JUL																															RANGE	PID Set	ACTION	TEST DATA	REMARKS		
			11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28																				
1	PIC-3		/	/																														35, 0.12	REV	P:100 → 100%				
2	PIC-4 Important		/	/																														0~100%	100, 0.5	REV	P:100 → 85%			
3	PRCA-19 Important		/	/																														-400~0~+250	100, 0.4	NOR	P:100 → 90%			
4	FRC-6A		/	/																														0~10 Nm <sup>3</sup> /H	50, 0.2	NOR	P:100 → 100%			
5	FIC-6B		/	/																														0~10 Nm <sup>3</sup> /H	75, 0.1	NOR	P:100 → 90%			
6	LICA-5		/	/																														0~100%	100, 0.05	REV	P:100 → 100%			



GASIFICATION PLANT VALVE CHECK SCHEDULE

NO	ITEM	DATE	JUL							VALVE LIFT TEST DATA				REMARKS			
			11	12	13	14	15	16	17	18	19	0%	25%		50%	75%	100%
1	PCV-4		▨									0	25	50	80	95	
2	PCV-3 (NO.1 N2 COMPER)		▨														
3	PCV-4 (No.2 N COMPer)		▨								0	25	48	70	90		
4	PCV-19 I (SYN GAS BLOWER)		▨								0	25	50	75	100		NOT CHECKED
5	PCV-19 II ( " )		▨														"
6	PCV-21 I (SYN GAS BOOSTER)		▨														"
7	PCV-21 II ( " )		▨														"
8	PCV-21 III ( " )		▨														"
9	PCV-21 IV ( " )		▨														"
10	FCV-6 (COMBUSTION AIR)		▨								0	40	75	100	100		
11	FCV-6A (NO.1 O2 BLOWER)		▨								5	25	50	75	95		

DATE

GASIFICATION PLANT VALVE CHECK SCHEDULE

NO	ITEM	DATE	JUL							VALVE LIFT TEST DATA				REMARKS											
			11	12	13	14	15	16	17	18	19	20	21		22	23	24	25	26	27	28	0%	25%	50%	75%
12	FCV-6B (NO.2 O2 BLOWER)		/																	0	25	50	75	100	Positioner changed
13	LCV-5 (STEAM DRUM)			/																0	25	50	75	100	Overhauled
14	HV-1A1 (O2 GASIFIER IN)		/		/															0				+100	
15	HV-1A2 ( " )		/																	0				+100	
16	HV-1B1 ( " )		/																	0				95	
17	HV-1B2 ( " )		/																	0				100	
18	HV-2A1 (N2 GASIFIER IN)		/																	0				80	
19	HV-2A2 ( " )		/																	20				100	
20	HV-2B1 ( " )			/		/														0				100	Panel indicator changed
21	HV-2B2 ( " )			/																0				100	SW overhaul change better
22	HV-3 (SYN GAS FLARE)			/		/														0				84	Adjusted
																				0				100	

GASIFICATION PLANT VALVE CHECK SCHEDULE

NO		ITEM	DATE	JUL							AUG					VALVE LIFT TEST DATA				REMARKS			
				1	2	3	4	5	1	2	3	4	5	0%	25%	50%	75%	100%					
				11	12	13	14	15	16	17	18	19	20										
23		HV-4 (N <sub>2</sub> SEAL POT IN)				<input checked="" type="checkbox"/>											0	0			+100		
24		HV-5 (N <sub>2</sub> BY-PASS)				<input checked="" type="checkbox"/>											-0	0			+100		
25		HV-6 (SYN GAS BLOWER)										<input checked="" type="checkbox"/>					0	0	0	0	0	0	Overhauled, motor changed
26		HV-7A1 (PIV-GEAR)				<input checked="" type="checkbox"/>											0	0					
27		HV-7A2 ( " )				<input checked="" type="checkbox"/>											0	0					
28		HV-7B1 ( " )				<input checked="" type="checkbox"/>											0	0					
29		HV-7B2 ( " )				<input checked="" type="checkbox"/>											0	0					
30		HV-1 (BLOWER F2)				<input checked="" type="checkbox"/>											0	0					
31		HV-2 (BOOSTER F3)				<input checked="" type="checkbox"/>											0	0					
32		HV-3 (ROLLER FEED)										<input checked="" type="checkbox"/>					0	0					
33		HV-4 (ERKO BELT)										<input checked="" type="checkbox"/>					0	0					

DATE



GASIFICATION PLANT VALVE CHECK SCHEDULE

NO	ITEM	DATE	JUL							VALVE LIFT TEST DATA				REMARKS	DATE														
			11	12	13	14	15	16	17	18	19	20	21			22	23	24	25	26	27	28	0%	25%	50%	75%	100%		
34	HV-5 (PRIMARY AIR)						■												0					100	Good				
35	HV-6 (SECONDARY AIR)						■												0					100					
36	HV-7 (ELECTRO FILTER OUT)							■											0					100					
37	HV-8/1 (BEHIND SEPARATOR)							■											0					100					
38	HV-8/2 ( " )							■											0					100					
39	HV-9 (STARTING STACK)							■											0					98					
40	HV-10 (FLUE GAS)							■											0					100	Good				
41	HV-11 (N <sub>2</sub> INERTISATION)							■											0					100	Panel meter				



ADIP PLANT VALVE CHECK SCHEDULE

NO	ITEM	DATE	JUL							VALVE LIFT TEST DATA				REMARKS					
			11	12	13	14	15	16	17	18	19	20	0%		25%	50%	75%	100%	
1	FCV-4-11-01 (in Abs ADIP)													10	35	60	85	90	
2	FCV-4-11-03 (REBOILER)													0	25	50	75	98	
														0	25	50	75	75	Overhauled
3	LCV-4-11-02 (ABSORBER)													0	30	50	75	95	
														0	25	50	75	100	

EGAT BOILER PLANT VALVE CHECK SCHEDULE

DATE		JUL																															VALVE LIFT TEST DATA				REMARKS		
NO	ITEM	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	0%	25%	50%	75%	100%															
	No.1 LCV- (STEAM DRUM)											█										0			-100														
	No.1											█										0			-100														
	No.2 LCV- (STEAM DRUM)											█										0			-100														
	No.2 TCV- (SUPER HEATER OUTLET)											█										0			-100														
	No.1																																						
	No.2																																						
	No.1																																						
	No.2																																						
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	No.2																																						

AMMONIA PLANT VALVE CHECK SCHEDULE

NO	ITEM	DATE	JUL							VALVE LIFT TEST DATA				REMARKS													
			11	12	13	14	15	16	17	18	19	20	21		22	23	24	25	26	27	28	0%	25%	50%	75%	100%	
1	TCV-3-29-04 (I) (HEAT EXCHANGER)																										
2	" (II) (HEAT EXCHANGER)																										
3	TCV-3-43-02 (COPPER SOLUTION)																				0	20	45	75	95		
4	FCV-3-29-02 (STEAM)																				0	25	50	75	100		
5	FCV-3-29-04 (HOT WATER FINAL COOLER)																				0	25	50	75	100		"
6	FCV-3-29-05 (HOT WATER SATU.T)																				0	5	25	45	70		
7	FCV-3-29-06 (HOT WATER DEM.T)																				0	12	37	60	95		
8	PCV-3-31-12 (FLASH VESSEL)																				0	25	50	75	100		
9	PCV-3-52-12 (TAIL GAS SCRUBBER)																				5	30	55	75	100		Overhaul
10	LCV-3-29-01 (SATURATOR BOTTOM)																				0	0	40	75	100		
11	LCV-3-29-02 (DEMOISTURE)																				0	25	50	75	100		Good
																					0	25	50	75	100		Overhaul

DATE			
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AMMONIA PLANT VALVE CHECK SCHEDULE

NO	ITEM	DATE	JUL							VALVE LIFT TEST DATA				REMARKS													
			11	12	13	14	15	16	17	18	19	20	21		22	23	24	25	26	27	28	0%	25%	50%	75%	100%	
12	LCV-3-31-01 (CO <sub>2</sub> SCRUBBER)																				0	25	50	75	100	Good	
13	LCV-3-43-01 (COPPER SOLUTION)					█															40	75	100	100	100	Position repaired	
14	LCV-3-43-03 (NH SCRUBBER)					█															15	35	60	80	85	"	
15	LCV-3-52-01 (NH <sub>3</sub> SEPARATOR)																				0	25	50	75	100		
16	LCV-3-52-03 (FLASH VESSEL)																				0	25	50	75	100		
17	LCV-3-52-04 (TAIL GAS SCRUBBER)								█												0	25	50	75	100		
18	LCV-3-52-05 (WASTE HEAT BOILER)								█												0	25	50	75	100		
19	HCV-3-52-02 (SYN GAS COMPER OUT)								█												0	25	40	40	40	40	indicator checked
20	HCV-3-52-03 (NH <sub>3</sub> CONV)									█											0	25	50	75	100	"	
21	HCV-3-52-04 (NH <sub>3</sub> CONV)										█										0	25	50	75	100	"	
22	HCV-3-52-05 (NH <sub>3</sub> CONV)											█									0	15	45	75	95	"	
																					0	25	50	75	100		

DATE			
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AMMONIA PLANT VALVE CHECK SCHEDULE

NO	ITEM	DATE	JUL											VALVE LIFT TEST DATA					REMARKS			
														0%	25%	50%	75%	100%				
			1	2	3	4	5	6	7	8	9	10	11	12	26	27	28					
23	HCV-3-52-06 (NH <sub>3</sub> CONV)																0	25	50	75	100	
24	HCV-3-52-07 (NH <sub>3</sub> SEPARATOR)																0	25	50	75	100	Position repaired
25	HCV-3-52-08 (HN <sub>3</sub> CONV BY PASS)																0	25	50	75	100	Good

DATE

SULPHURIC ACID PLANT VALVE CHECK SCHEDULE

NO	ITEM	DATE	JUL							VALVE LIFT TEST DATA				REMARKS											
			11	12	13	14	15	16	17	18	19	20	21		22	23	24	25	26	27	28	0%	25%	50%	75%
1	LCV- (STEAM DRUM)																			0	25	50	75	100	



AMMONIA  
SULPHATE PLANT VALVE CHECK SCHEDULE

NO	DATE ITEM	JUL																															VALVE LIFT TEST DATA 0% 25% 50% 75% 100%	REMARKS
		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28															
1	PCV-2-51-02 (NH <sub>3</sub> GAS)													<input checked="" type="checkbox"/>													0	25	50	75	100			
2	PCV-2-51-09 (COOLING WATER)												<input checked="" type="checkbox"/>														0	25	50	75	100	Overhaul		
3	LCV-2-51-02 (EVAPORATOR)												<input checked="" type="checkbox"/>														0	25	50	75	100	"		
4	TCV-2-51-09 (NH <sub>3</sub> SUPER HEATER)												<input checked="" type="checkbox"/>														0	25	50	75	100	"		

DATE

ALL PLANT PG CHECK SCHEDULE

NO	ITEM	DATE	JUL																												REMARKS
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
1	GASIFICATION																														32 Set
2	FEED WATER																														13 Set
3	ADIP																														23 Set
4	EGAT BOILER																														17 Set
5	AMMONIA																														65 Set
6	AIR SEPARATION																														23 Set
7	SULPHURIC ACID																														8 Set
8	AMMONIA SULPHATE																														7 Set
																															188 pcs

DATE

BOILER GASIFICATION, ADIP PLANT PROTECTION TUBE INSPECT SCHEDULE

NO		DATE	JUL																												LENGTH mm	RATING	REMARKS						
			11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28																			
		ITEM																																					
		[BOILER]																																					
1		TI- AIR PREHEATOR OUT																																					
2		TI- FLUE GAS PREHEATER OUT																																					
		[GASIFICATION]																																					
1		TR-1/3 COAL SHAFT																																					
2		TR-23/1 RADIATION BOILER IN																																					
3		TR-23/4 TUBULAR BOILER OUT																																					
4		TR-24/3 SYN GAS BLOWER																																					
5		TR-23-3 [ADIP]																																					
1		TR-4-11-1.15 ABSORBER OUT																																					
2		TR-4-11-01/2 ABSORBER OUT GAS																																					
3		TR-4-11-07																																					
4		TR-4-11-08																																					

DATE			
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SULPHURIC ACID  
AMMONIUM SULPHATE PLANT PROTECTING TUBE INSPECT SCHEDULE

NO	ITEM	DATE	JUL							RATING	LENGTH	REMARKS																																	
			11	12	13	14	15	16	17				18	19	20	21	22	23	24	25	26	27	28																						
	H <sub>2</sub> SO <sub>4</sub> PLANT																																												
1	TI-861-1-1																																												
2	TI-861-1-5																																												
3	TI-861-1-10																																												
4	TI-868-11																																												
5	TI-861-1-7																																												
6	TI-861-1-2																																												
7	TI-868-																																												

AMMONIA PLANT PROTECTING TUBE INSPECT SCHEDULE

NO	DATE		JUL																												RATING	LENGTH	REMARKS			
	ITEM		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28																
	[AMMONIA PLANT]																																			
1	TR-3-29-01/3 (OUT PRE CONV)				/																															
2	TR-3-29-01/8 (OUT GAS DOMOISTURE)			/																																
3	TR-3-29-01/11 (OUT CO2 SCRUBBER)		/																																	
4	TIC-3-29-04 (HEAT-EXCHANGER)		/																																	
5	TI-3-43-01/1 (OUT COPPER SOLUTION)																																			
6	TI-3-43-01/4 (NH3 WATER PUMP)																																			
7	TI-3-43-01/10 (IN REGENERATOR)																																			
8	TR-3-52-01/9 (TAIL GAS SCRUBBER)																																			
9	TI-3-43-01/2																																			
10	TI-3-43-01/7																																			
11	LICA 3-31-01																																			

DATE

AMMONIA  
EGAT BOILER PLANT CHANGE THE NEW TYPE SCHEDULE

NO	ITEM	DATE	JUL							SPECK	REMARKS									
			11	12	13	14	15	16	17			18	19	20	21	22	23	24	25	26
1	PCV-3-65-01							█	█		VDC, 2 1/2 JPI600									
2	WIRING							█	█		CWS 1.25 sq									
3	PK-32									█										
4	PT 3-52-09											█								
5	PT 3-52-04												█							

FEED WATER PLANT STEAM SYSTEM CHANGE SCHEDULE

DATE		JUL							REMARKS										
NO	ITEM	11	12	13	14	15	16	17		18	19	20	21	22	23	24	25	26	27
1	PANEL DRIPARATION																		See 4-4-2-6
2	PANEL RUN																		
3	CONTROLLER PRIPARATION																		PIC-3-65-01,02,03 TIC-3-65-01, LIC DEARATOR
5	TRANSMITTER "																		PIC-3-65-01,02,03 LIC DEARATOR PI DEARATOR
6	RECORDER "																		PR-3-65-01,02 (type M/64)
7	CONTROL LALVE "																		PCV-3-65-01
8	WIRING																		PANEL BACK BORD & PIC-3-65-01 CABLE 350 m
9	TEST																		SYSTEM ALL CHECK
10	I.A TAKE OUT																		PIC-3-65-03, PK-32
11	TRANSMITTER LEED PIPE																		LIC DEARATOR, PIC-3-65-01,02

DATE

AIR SEPARATION

AMMONIA PLANT N<sub>2</sub> LINE CHANGE SCHEDULE

NO	ITEM	DATE		JUL																												REMARKS	
		DATE	TIME	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28												
1	PANEL MANUFACTURE																																See 4-4-2-7
2	PANEL RUN																																
3	FIC, PIC MANUFACTURE																																FIC-3-31-03, PIC-8-21-01
4	PT MANUFACTURE																																PIC-8-21-01 Lead pipe
5	PCV, FCV MANUFACTURE																																PCV-8-21-01, FCV-3-31-0
6	WIRING																																PANEL BACK BORD
7	TEST																																SYSTEM CHECK
8	I.A TAKE OUT																																PCV-8-21-01, PIC-8-21-01, FCV-3-31-03

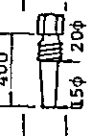
DATE



GASIFICATION PLANT THERMOCOUPLE CHANGE SCHEDULE

NO	ITEM	DATE	JUL																															SPEC	REMARKS		
			11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28																	
1	TRA-2-1																																			Pt 100Ω, PT-6-900-F100-5002-PT 1/4	
	" -2,3,4,5																																			Pt 100Ω, PT-6-400-F100-5002-PT 1/4	
2	TRA-3-1																																			Pt 100Ω, PT-6-1150-D100-5002-PT 1/4	Recorder mai mee element not change
	" -2 ~ 4																																		Pt 100Ω, PT-6-6500-D100-5002-PT 1/4		
	" -5																																		" -3950-		
	" -6																																			" -300-F100-	
3	TR-20-1																																			Pt 100Ω, PT-6-300-F100-5002-PT 1/4	Only one point
5	TR-24-1 ~ 3																																			Pt 100Ω, PT-6-400-F100-5002-PT 1/4	

AMMONIA PLANT THERMOCOUPLE CHANGE SCHEDULE

NO	ITEM	DATE	JUL																															SPEC	REMARKS					
			11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28																				
1	TR-3-29-01-1 ~ 7																																						I.C6.4φ T-96B-450-FJF-5008/5002-PF 3/4	
	" -8					☒																																" -300-		
	" -9																																					" -450-		
	" -10 ~ 12					☒																																" -300-		
2	TI-3-29-02-1																																				I.C6.4φ T-96B-300-FJF-5008/5002-PF 3/4	TI-3-29-02/2		
	" -2,3					☒																															" -450-	400		
	" -4 ~ 8					☒																															" -300-	Scar observed at the top, to be replaced within two years. 		
3	TIC-3-29-04																																				I.C6.4φ T-96B-300-FJF-5008/5002-PF 3/4			
4	TI-3-43-01-1 ~ 4																																				I.C6.4φ T-96B-300-FJF-5008/5002-PF 3/4			
	" -5,6					☒																															" -450-			
	" -7 ~ 11					☒																															" -300-			
5	TIC-3-43-02																																				I.C6.4φ T-96B-450-FJF-5008/5002-PF 3/4			

UREA PLANT CONTROL VALVE O.H SCHEDULE

NO	ITEM	DATE	AUG														RATING	TIGHT TEST	LEAKAGE TEST	TEST DATA (%)							
			7	8	9	10	11	12	13	14	15	16	17	18	19	20				21	22	23	24	0	25	50	75
1	TRC-3-57-02		///																	1.1505.5/11 25/60475 I25/4571 ES P093G	1	0 l/min.	0	25	50	75	100
2	LICA-3-57-07		///																	1.1505.5/16 25/60480 4580/4112 E12 P4G	25 ND25/40	0 l/min.	0	25	50	75	100
3	LICA-3-57-03		///																	1.15505.5/16 25/60480 45/80/4112 E12 P4G	25 ND25/40	0 l/min.	0	25	50	75	100
4	LICA-3-57-01						///														50 ND25/40	0 l/min.	0	25	50	75	100
5	LIC-3-57-04						///													1.1505.5/17 25/60481 4580/4112 E15 P6G	25 ND25/40	0.06 l/min.	0	25	50	75	100
6	FRRC-3-57-06												///							1.1505.5/12 20/60C76 4580/4571-H E4 P0.025G	20 ND25/40 4580	0 l/min.	0	25	50	75	100
7	PRC-2-81-04												///								25 ND25/40 GS	0 l/min.	0	25	50	75	100
8	TRC-2-81-7															///				1.1337-5/2 25160486 GS/4577-H E18 P9G	25 ND25/40	1.0 l/min.	0	25	50	75	100

UREA PLANT CONTROL VALVE O.H SCHEDULE

NO	ITEM	DATE	AUG														RATING	TIGHT TEST	LEAKAGE TEST	TEST DATE (%)									
			7	8	9	10	11	12	13	14	15	16	17	18	19	20				21	22	23	24	0	25	50	75	100	
																				0	25	50	75	100					
9	TRC-2-81-05																				1.1337.5/2 50/60/485 GS2571-H E32 P20G	50 ND25/40 GS	0.03 l/min.	0	25	50	75	100	
10	TRC-3-57-10																				1.1505.5/17 25/60481 4580/4112 E15 P6G	25 ND25/40	0.09 l/min.	0	25	50	75	100	

UREA PLANT CONTROL VALVE POSITION CHECK SCHEDULE

DATE

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NO	ITEM	DATE	AUG																
			14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	PRC 3-57-16																		
2	PRC 3-57-15																		
3	LJCA 3-57-02																		
4	PRC 3-57-12																		
5																			
6	PRC 3-57-05																		
7	PICA 3-57-32																		
8	LIC 3-57-04																		
9	PIC 3-57-17																		
10	TRC 3-57-06																		
11	TRC 3-57-08																		
12	PRC 3-57-25																		

UREA PLANT CONTROL VALVE POSITION CHECK SCHEDULE

NO	ITEM	DATE	AUG												DATE										
			14	15	16	17	18	19	20	21	22	23	24	25		26									
13	LICA 3-57-08					/												0	25	50	75	95	Overhaul next occasion		
14	LICA 3-57-09					/													good						
15	TIC 2-81-10						/												good						
16																									
17	FRC 2-81-01					/													good, no adjust						
18	PIC 2-81-11					/													"						
19	LIC-3-57-05						/												"						
20	PIC-3-57-32						/												B	0	25	50	75	95	Overhaul should be practised.
																			A	0	30	60	75	100	



REA PLANT CONTROLLER O.H SCHEDULE

DATE		AUG														DATE			
		13	14	15	16	17	18	19	20	21	22	23	24	25	26		27	28	29
NO	ITEM																		
13	LIC-3-57-03																<input checked="" type="checkbox"/>		PB:100% → 95%    RESET OK
14	TRC-3-57-06								<input checked="" type="checkbox"/>										PB: OK    RESET 2 min → 1 min 50 sec    D: OK
15	LIC-3-57-04													<input checked="" type="checkbox"/>					PB:100% → 90%    RESET 1 min → 1 min 30 sec
16	TRC-3-57-08								<input checked="" type="checkbox"/>										PB:100% → 90%    RESET OK    D: 2 min → 2 min 20 sec
17	PRC-3-57-25								<input checked="" type="checkbox"/>										
18	LICA-3-57-08								<input checked="" type="checkbox"/>										
19	LICA-3-57-09																		PB:100% → 95%    RESET 2 min → 1 min 50 sec
20	TIC-2-81-10									<input checked="" type="checkbox"/>									
21	PRC-2-81-04																		PB:100% → 95%    RESET OK
22	FrRC-2-81-01																		
23	TRC-2-81-05																<input checked="" type="checkbox"/>		PB:100% → 90%    RESET OK    D.ACTION no good



UREA PLANT CONTROLLER O.H SCHEDULE

NO	DATE	ITEM	AUG													D.ACTION	No good																					
			13	14	15	16	17	18	19	20	21	22	23	24	25			26	27	28	29	30																
24		TRC-2-81-07																																				

DATE

PB: OK    RESET 2 min → 1 min 30 sec    D.ACTION No good

UREA PLANT TRANSMITTER CHECK SCHEDULE

DATE		AUG												DATE					
NO	ITEM	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	FR 3-57-03				See			Position change											
					4-4-2-8														
2	PRC 3-57-16									0 ~ 6		kg/cm <sup>2</sup> G							
3	FIRC 3-57-08									0 ~ 0.2		m <sup>3</sup> /H	flowrater						
4	FRC 3-57-02									0 ~ 3600		mm	WS						
5	FRC 3-57-15									0 ~ 6		kg/cm <sup>2</sup> G							
6	LICA 3-57-02																		
7	PRC 3-57-12											0 ~ 400	kg/cm <sup>3</sup> G						
8	LICA-3-57-08																		
9	FIRC-3-57-07																		

BEFORE 0.14 0.35 0.55 0.72 0.77 K 0-100 mm WS

AFTER 0.2 0.4 0.6 0.8 1.0 K

B 0.25 0.45 0.62 0.89 1.09 K

A 0.2 0.4 0.6 0.8 1.0 K

B 0.2 0.44 0.61 0.81 0.99 K

A 0.2 0.4 0.6 0.8 1.0 K

B 0.08 0.28 0.48 0.68 0.87 K

A 0.2 0.4 0.6 0.8 1.0 K

B 0.21 0.42 0.63 0.84 1.4 K

A 0.2 0.4 0.6 0.8 1.0 K

OK no adjust

B 0.21 0.43 0.63 0.83 1.03 K

A 0.2 0.4 0.6 0.8 1.0 K

OK no adjust

Indicating pen was repaired

UREA PLANT OVERHAUL FOR RECORDER SCHEDULE

NO	ITEM	DATE	AUG														SCALE											
			7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24							
1	FRC-3-57-02																				BEFORE	0	25	50	75	100%	0	-10 m <sup>3</sup> /H
																					AFTER	0	0	0	0	0	0	0
2	FR-3-57-03																				B	-1	-1	0	-1	0	0	-10 "
																					A	0	0	0	0	0		
3	FR-3-57-07																				B	0	-1	0	0	0	0	-100 x 0.02 m <sup>3</sup> /H
																					A	0	0	0	0	0		
4	FR-2-81-01																				B	-1	-1	-1	-1	0	0	-100 x 0.07 m <sup>3</sup> /H
																					A	0	0	0	0	0		
5	FR-3-57-08																				B	0	+1	+1	+1	0	0	-100 x 0.002 m <sup>3</sup> /H
																					A	0	0	0	0	0		
6	PRC-3-57-05																				B	-1	-1	-1	0	0	0	-40 kg/cm <sup>2</sup> G
																					A	0	0	0	0	0		
7	PRC-3-57-12																				B	-1	-1	0	+1	-1	0	-400 kg/cm <sup>2</sup> G
																					A	0	0	0	0	0		
8	PRC-3-57-15																				B	-1	-1	0	-1	-1	0	-6 kg/cm <sup>2</sup> G
																					A	0	0	0	0	0		
9	PRC-3-57-16																				B	-2	-2	-2	-2	-2	0	-6 kg/cm <sup>2</sup> G
																					A	0	0	0	0	0		
10	PRC-3-57-25																				B	0	0	-1	-1	-1	0	-4 kg/cm <sup>2</sup> G
																					A	0	0	0	0	0		
11	PR-2-81-07																				B	0	0	0	-1	-1		
																					A	0	0	0	0	0		

DATE



UREA PLANT CO<sub>2</sub> DRYING SCHEDULE

NO	ITEM	DATE	AUG													REMARKS
			5	6	7	8	9	10	11	12	13	14	15			
1	CYLINDER 6 SET				/	/										O.H
2	3 WAY MAGNETIC VALVE		/													O.H Magnet valve inside coil changed
3	LIMIT S.W. CO <sub>2</sub> GAS						/									O.H
4	TIA 3-44-01						/									Contact checked
5	TIA 3-44-02															"
6	MAGNETIC VALVE O <sub>2</sub>						/									O.H Magnetic valve inside coil changed
7	FLOW LIMIT S.W.						/									New type change

UREA PLANT INDICATOR CHECK SCHEDULE

NO	ITEM	DATE	AUG							REMARKS										
			13	14	15	16	17	18	19		20	21	22	23	24	25	26	27	28	29
1	LICA-3-57-02						☒													
2	LICA-3-57-09						☒													
3	LICA-3-57-08								☒											
4	PI-2-81-07						☒													
5	LICA-3-57-01									☒										Contact for alarm cleaned
6	LIA-2-81-01									☒										"
7	PRCA-3-57-05									☒										"

UREA PLANT TRANSDUCER CHECK SCHEDULE

NO	ITEM	DATE	AUG														REMARKS				
			7	8	9	10	11	12	13	14	15	16	17	18	19	20		21	22	23	24
1	TRC-2-81-10																				0 37.5 75 112.5 150°C (I.C) B -1.05 2.95 7.1 mV B 0.16 0.43 0.55 0.7 0.98 K A 0.2 0.6 1.05 K
2	TRC-2-81-07																				50 75 100 125 150°C (I.C) 1.6 2.95 4.32 5.7 7.1 mV B 0.15 0.33 0.51 0.69 0.89 K A 0.21 0.395 0.595 0.79 1.0 K
3	TRC-2-81-05																				50 75 100 125 150°C (I.C) 1.6 2.95 4.32 5.7 7.1 mV B 0.18 0.37 0.56 0.75 0.96 K A 0.21 0.4 0.6 0.795 0.995 K
4	TRC-3-57-10																				0 75 150°C (I.C) -1.05 2.95 7.1 mV B 0.2 0.6 1.0 K
5	TRC-3-57-06																				0 50 100 150 200°C (I.C) -1.05 1.6 4.32 7.1 9.9 mV B 0.2 0.36 0.61 0.82 1.03 K A 0.19 0.39 0.6 0.81 1.01 K

DATE

UREA PLANT CHECK TO ALARM SCHEDULE

NO	ITEM	DATE	AUG							REMARKS												
			14	15	16	17	18	19	20		21	22	23	24	25	26	27	28	29	30	31	
1	LICA-3-57-09HL										/										good	
2	LICA-3-57-01HL										/											good lamp changed
3	LICA-3-57-02HL										/											good
4	LICA-3-57-07HL										/											good
5	PICA-3-57-32											/										good
6	PRIA-3-57-05											/										good indicator overhauled
7	LIA-2-81-01											/										good "
8	LIA-3-57-01											/										good "
9	FRCA-3-57-02											/										lamp mai mee
10	TIA-3-57-12											/										no good mai mee ANN Card
11	LICA-3-57-08											/										good wiring
12	ARA-3-57-01											/										

DATE				
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UREA PLANT CHECK TO LOOP SCHEDULE

NO	ITEM	DATE	AUG											REMARKS								
			14	15	16	17	18	19	20	21	22	23	24		25	26	27	28	29	30	31	
1	FrRC-3-57-07																					good overhauled and adjusted the zero position
2	LIC-3-57-03																					good the flapper of d/p cell transmitter inspected
3	PRC-3-57-16																					good
4	PRC-3-57-25																					"
5	FrRC-3-57-08																					"
6	LIC-3-57-05																					"
7	LIC-3-57-04																					"
8	FrRC-2-81-01																					"
9	PIC-3-57-32																					"
10	LIC-3-57-07																					"
11	LIA-2-81-01																					" transmitter overhauled

UREA PLANT CHECK TO LOOP SCHEDULE

NO	ITEM	DATE	AUG																															REMARKS		
			14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31																
12	LIC-3-57-02																																			good
13	FRC-3-57-02																																		good	
14	LIC-3-57-09																																		good gauge for transmitter output overhauled	
15	LIC-3-57-01																																		good	
16	PRC-3-57-05																																		"	
17	PRC-2-81-04																																		"	
18	PR-2-81-07																																		"	
19	LIA-2-81-04																																		not used (no nozzle and no lead pipe)	
20	LI-2-81-02																																		not used (no lead pipe)	
21	LICA-3-57-08																																		good	
22	PICA-3-57-32																																		"	

DATE

UPEA PLANT CHECK LOOP SCHEDULE

NO	ITEM	DATE	AUG							REMARKS													
			14	15	16	17	18	19	20		21	22	23	24	25	26	27	28	29	30	31		
23	PRC-3-57-12										<input checked="" type="checkbox"/>										good		
24	PRC-3-57-15										<input checked="" type="checkbox"/>											good	



MOTOR LIST

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

BABCOCK PLANT

NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
1	F <sub>1</sub> HS-MILL	OR3024-4D		6000 V	39 A	340 KW	1492 rpm	
2	F <sub>2</sub> PAAWR FAN	2424-4B3	Δ	380 V	290 A	160 KW	1485 rpm	
3	F <sub>4</sub> FD-FAN	OR1324-4	Δ	380 V	37 A	18.5KW	1460 rpm	
4	F <sub>3</sub> BOVSTER FAN	"	"	"	"	"	"	
5	F <sub>7</sub> ROLLES FEEDER	OR426-4	Δ/Y	220/ 380 V	6.4/ 3.7 A	1.5 KW	1410 rpm	
6	OIL PUMP NO.1	D-MOT80	Y/Δ	380/ 220 V	1.75/3 A	0.55KW	1400 u/min	
7	OIL PUMP NO.2	"	"	"	"	"	"	
8	PIT BIN	D-MOT	Δ/Y	220/ 380 V	1.73/1 A	0.37KW	2700 u/min	
9	RECLOINING MACHINE	OR524-4	Δ/Y	220/ 380 V	11.8/ 6.8 A	3 KW	1400 u/min	
10	BELT THE RECLAINING	624-4	Δ/Y	220/ 380 V		3 KW	1425 u/min	
11	O <sub>2</sub> SUBNURGED	D-MOT -OR426-6	Δ	380 V	2.2 A	1.1 KW	910 u/min	
12	O <sub>1</sub> PADOLE SHAFT	OR722-4	Δ	380 V	11.7 A	5.5 KW	1440 u/min	
13	PIV GEAR	OR424-4	Δ	380 V	2.8 A	1.1 KW	1400 u/min	
14	O <sub>5</sub> CONVEYER	OR626-4	Δ	380 V	8.7 A	4 KW	1430 u/min	
15	N <sub>1</sub> E-FILTER	YR93		220/ 380 V	0.77/ 0.44A	0.13KW		
16	HUMP CONVEYER	OR824-4	Δ/Y	220/ 380 V	38.7/ 22.4A	11 KW	1450 u/min	
17	F <sub>6</sub> ROLLER FEEDER I	OR426-4	Δ/Y	220/ 380 V	6.4/ 3.7 A	1.5 KW	1410 rpm	
18	" II	"	"	"	"	"	"	
19	F <sub>8</sub> NO.1	326-4	Δ/Y	220/ 380 V	3.4/ 1.95A	0.75 KW	1400 rpm	
20	F <sub>8</sub> NO.2	"	"	"	"	"	"	
21	MOTOR VALVE	OPR2260-4	Δ/Y	220/ 380 V	1.05/ 0.6 A	0.1 KW	1320 u/min	

## LIGNITE GRINDING AND DRYING PLANT

NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
1	WATER PUMP	AD80K2	Δ/Y	220/ 380 V	3.3/ 1.9A	0.75 KW	2840 u/min	
2	COOLING WATER II	OALY26-4	Δ	380 V	84 A	45 KW	1470 u/min	
3	" I	"	"	"	"	"	"	
4	THEISEN NO.2	OR2426-6	Δ	380 V	290 A	160 KW	985 rpm	
5	" NO.1	"	"	"	"	"	"	
6	N <sub>2</sub> BLOWER NO.1	OR2024-4	Δ	380 V	139 A	75 KW	1480 rpm	
7	" NO.2	OR1324-4	Δ	380	37 A	18.5 KW	1460 rpm	
8	O <sub>2</sub> BLOWER NO.1	OR2224-2	Δ	380	200 A	110 KW	2975 rpm	
9	" NO.2	"	"	"	"	"	"	
10	ASH EXTRACTOR		Δ/Y	220/ 380 V	9.8 A	2.2 KW	935 u/min	
11	SCREW UNIT B <sub>2</sub>	OR726-4	Δ/Y	220/ 380 V	27/ 15.6A	7.5 KW	1440 u/min	
12	" A <sub>2</sub>	"	"	"	"	"	"	
13	" B <sub>1</sub>	"	"	"	"	"	"	
14	" A <sub>1</sub>	"	"	"	"	"	"	
15	SYN-GAS BLOWER I	OR2026-2	Δ	380 V	16.5A	90 KW	2975 rpm	
16	" II	"	"	"	"	"	"	
17	BOOSTER NO.1	OR-2224-2	Δ	380 V	200 A	110 KW	2975 rpm	
18	" NO.2	"	"	"	"	"	"	
19	" NO.3	"	"	"	"	"	"	
20	" NO.4	"	"	"	"	"	"	
21	SPRAYING NO.1	KG250m/4	Δ	220 V	195 A	55 KW	1485 u/min	



NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
22	SPRAYING NO.2	KG250m/4	Δ	220 V	195 A	55 KW	1485 u/min	
23	" NO.3	"	"	"	"	"	"	
24	COOLING FOR OUENCHING I	1LA2066- 2AA	Δ/Y	220/ 380 V	4.2/ 8.2 A	4 KW	2880 u/min	
25	" II	"	"	"	"	"	"	
26	TRANS POT NO.1	OR524-4	Δ/Y	220/ 380 V	11.8/ 6.8 A	3 KW	1400 u/min	
27	" NO.2	1LA-2054/ 4AA	Δ/Y	"	"	"	"	
28	HORIZETAL NO.1	1LA2054/ 4AA	Δ/Y	220/ 380 V	11.8/ 6.8 A	3 KW	1400 u/min	
29	" NO.2	OR524-4	"	"	"	"	"	
30	WINCH	1LA2788- 4AA	Δ	380 V	30.3 A	15 KW	1450 u/min	
31	N <sub>2</sub> COMP OIL	OR526-4	Δ/Y	220/ 380 V	88/ 5.1 A	2.2 KW	1410 u/min	
32	OIL PUMP NO.2	1LA2053- 6AA	Δ/Y	380 V	4.0 A	1.5 KW	925 u/min	
33	OIL O <sub>2</sub> LOWER II	D-MOT OR424-4	Δ/Y	220/ 380 V	4.8/ 2.8 A	1.1 KW	1400 u/min	
34	" I	"	"	"	"	"	"	
35	VITREA NO.1	AK90SA-4H	Y	380 V	0.4 A	0.15 KW	1425 u/min	
36	" NO.2	"	"	"	"	"	"	
37	OIL PUMP NO.1	1LA2053- 6AA	Δ	380 V	4.0 A	1.5 KW	925 u/min	

## AIR SEPARATION PLANT

NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
1	N <sub>2</sub> BLOWER	COR726-2	Δ	380 V	12.3A	6.5 KW	2935 u/min	
2	AUX PUMP	COR624-4	Δ/Y	220/ 380 V	11.6/ 6.7 A	3 KW	1425 rpm	
3	OIL PUMP TURBIN 2	AM90S4	Δ/Y	220/ 380 V	4.9/ 2.8 A	1.1 KW	1410 rpm	
4	" 1	"	"	"	"	"	"	
5	CYLINDER LUBRI- CATION N <sub>2</sub> COMP 2	COR424-6	Δ/Y	220/ 380 V	3.3/ 1.91A	0.65 KW	920 u/min	
6	" 1	"	"	"	"	"	"	
7	N <sub>2</sub> COMP 1	CSOR3828- 16B	Y	6000 V	40 A	290 KW	370 rpm	
8	" 2	"	"	"	"	"	"	
9	OIL PUMP N <sub>2</sub> COMP 2	626-4	Δ/Y	220/ 380 V	13.6/ 7.9 A	3.6 KW	1430 u/min	
10	" 1	"	"	"	"	"	"	
11	HEATING BLOWER	COR2226-6	Δ	380 V	16.5 A	90 KW	985 rpm	
12	EMERGENCY AIR COMP							
13	SWITCHING MACHINE	NF423	Δ/Y	220/ 380 V	3.2/ 1.84A	0.33	1500 rpm	
14	COOLING WATER PUMP 1	OR825-2	Δ	380 V	29 A	15 KW	2935 rpm	
15	" 2	"	"	"	"	"	"	
16	EXEITER	G492-4		115 V	17.4 A	2 KW	1500 rpm	
17	ASKANIA CONTROLLER	K351/4M	Δ/Y	220/ 380 V	3.6/ 2.08A	0.75	1390 rpm	
18	EXEITER	G1293-4		60 V	267 A	16 KW	1500	DC GENERATOR
19	LIQUID O <sub>2</sub> PUMP	COR2026-4	Δ	380 V	165 A	90 KW	1480 rpm	
20	EXPANSION TURBINE 2							
21	" 1	COR2026-4	Δ	380 V	165 A	90 KW	1480 rpm	

## AMMONIA PLANT

NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
1	FAN FOR SWITCH ROOM II	COR225-4	Δ/Y	220/ 380 V	1.32/ 0.77A	0.25 KW	1320 u/min	
2	" I	"	"	"	"	"	"	
3	BLOWER FOR SPRINGING BOX II	IMA2025- 2CA	Δ/Y	220/ 380 V	1.72/ 1.0 A	0.37 KW	2750 u/min	
4	" I	"	"	"	"	"	"	
5	COIL PUMP	OR824-2	Δ	380 V	18 A	9.5 KW	293.5 u/min	
6	WARM WATER I	"	"	"	"	"	"	
7	" II	"	"	"	"	"	"	
8	HP-NH <sub>3</sub> MOTOR I	COR-1324- 4	Δ	380 V	34 A	17 KW	1465 rpm	
9	" II	"	"	"	"	"	"	
10	WB-PUMP	IMA2072- 4BA		380 V	10.5 A	5 KW	1445 rpm	
11	HP PUMP CONDENSATE	IMA2078- 4BA	Δ	380 V	14.1 A	6.8 KW	1445 rpm	
12	DRIVE MACHAINISUM I	COR724-4	Δ/Y	220/ 380 V	18.1/ 10.5A	5 KW	1445 rpm	
13	" II	"	"	"	"	"	"	
14	CENTRIFULGAL FOR NH <sub>3</sub>	IMA2046- 2BA	Δ	380 V	3.95 A	1.85 KW	2840 rpm	
15	CENTRIFULGAL C.U.S I	COR624-2	Δ/Y	220/ 380 V	8.6/ 5.0 A	2.5 KW	2900 u/min	
16	" II	"	"	"	"	"	"	
17	CYLINDER LUBRICATION LP I	COR325-4	Δ/Y	220/ 380 V	2.54/ 1.47A	0.55 KW	1390 rpm	
18	" LP II	"	"	"	"	"	"	
19	" HP I	COR526-4	Δ/Y	220/ 380 V	7.7/ 4.45A	2 KW	1420 rpm	
20	" HP II	"	"	"	"	"	"	
21	EXITER TRANS-FORMER I,II,III							

NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
22	EXCITER TRANSFORMER I, II, III							
23	SYNTHESIS COMP I	EFS PFW 580/18-24		6000 V	263 A	2500 KW	250 rpm	
24	" II	"		"	"	"	"	
25	HP CENTRIFUGAL TURBIN	1MA3 354-4B	Y	6000 V	127 A	1100 KW	1490 rpm	
26	GAS CIRCULATING COMP II	COR 2624-6	Δ	380 V	280 A	153 KW	990 rpm	
27	HYDRALIC OIL SUPPLY	COR 523-4DH	Δ	380 V	40 A	1.8 KW	1420 rpm	
28	HOT WATER PUMP I	COR 2024-2	Δ	380 V	118 A	64 KW	2970 rpm	
29	" II	"	"	"	"	"	"	
30	CIRCULATING WATER II	1LA2.204		380 V	139 A	75 KW	1480 rpm	
31	HP CUS-PUMP I	COR 2624-6	Δ	380 V	330 A	180 KW	990 rpm	
32	CIRCULATING WATER I	1LA2 204		380 V	139 A	75 KW	1480 rpm	
33	HP CUS PUMP II	COR 2624-6	Δ	380 V	330 A	180 KW	990 rpm	
34	GAS CIRCULATING COMP I	COR 2624-6	Δ	380 V	280 A	153 KW	990 rpm	
35	AMMONIA COMP I	COR 2426-4	Δ	380 V	310 A	175 KW	1490 rpm	
36	" II	"	"	"	"	"	"	
37	FAN INSTRUMENT I							
38	" II							
39	FAN CO <sub>2</sub> NO.1	D547E/2021	Δ	380 V	17 A	10 HP	1455 rpm	
40	" NO.2	"	"	"	"	"	"	
41	" NO.3	"	"	"	"	"	"	
42	" NO.4	"	"	"	"	"	"	

SUBSTATION NO.1, 2, 3

NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
1	FAN FOR SUBSTATION	COR 518-4	Δ/Y	220/ 380 V	5.9/ 3.4 A	1.4 KW	1415 u/min	
2	AIR FOR MAN	1LA 2046-4AA	Δ/Y	220/ 380 V	6.4/ 3.7 A	1.5 KW	1410 u/min	
3	FAN OF STARTING TRAUS	COR 426-4	Δ/Y	220/ 380 V	5.6/ 3.25A	1.35 KW	1410 u/min	
4	LIGHTING TRANSFORMER	1LA 2046-4AA	Δ/Y	220/ 380 V	6.4/ 3.7 A	1.5 KW	1410 u/min	
5	FAN TRANSFORMER 3	1LA2046- 4AA	Δ/Y	220/ 380 V	6.4/ 3.7 A	1.5 KW	1410 u/min	
6	"	2 COR 426-4	Δ/Y	220/ 380 V	5.6/ 3.25A	1.35 KW	1410 u/min	
7	"	1 "	"	"	"	"	"	
8	"	1 OR426-4	Δ/Y	220/ 380 V	6.3/ 3.7 A	1.5 KW	1410 rpm	
9	"	2 "	"	"	"	"	"	
10	"	3 "	"	"	"	"	"	
11	FAN	OR29S-2	Δ/Y	220/ 380 V	3.1/ 1.8 A	0.75 KW	2790 u/min	
12	FAN OF TRANSFORMER 1	OR426-4	Δ/Y	220/ 380 V	6.3/ 3.7 A	1.5 KW	1410 u/min	
13	"	2 "	"	"	"	"	"	
14	"	3 "	"	"	"	"	"	
15	FAN MOTOR LIGHTING 1	"	"	"	"	"	"	
16	FAN SUB 3	OR325-2	Δ/Y	220/ 380 V	3.2/ 1.85A	0.75 KW	2800 u/min	

UREA SYNTEHSIS PLANT

NO	SERVICE	TYPE	CONNE CTION	VOLT	AMP	CAPA CITY	RPM	REMARKS
1	VENTILATOR 2	COR824-6	Δ	380 V	15.3 A	6.6 KW	955 rpm	
2	" 3	"	"	"	"	"	"	
3	" 4	"	"	"	"	"	"	
4	" 1	"	"	"	"	"	"	
5	CONVEYER IN STORAGE 1	1MA 2778-4BA	Δ	380 V	15.3 A	6.8 KW	1460 rpm	
6	" 2	726-4	Δ	380 V	14.1 A	6.8 KW	1445 rpm	
7	SCREEN	COR523-4		380 V	4.4 A	2 KW	1425 rpm	
8	BUCKET ELEVATOR	COR626-4		380 V	7.9 A	3.6 KW	1430 rpm	
9	CONVEYER BELT	COR724-4		380 V	10.5 A	5 KW	1445 rpm	
10	PRILL RAKE	OR1526-4	Δ	380 V	42 A	22 KW	1470 rpm	
11	OIL OF PRILL RAKE	P141AZ	Y	380 V	1.89 A	116 W	1410 u/min	
12	PRILL CENTRIFUGE 2	COR822-8	Δ	380 V	8.8 A	3.5 KW	715 rpm	
13	" 1	"	"	"	"	"	"	
14	WASTE GAS BLOWER	COR326-2	Δ	380 V	2.5 A	1.1 KW	2860 rpm	
15	MELT PUMP 2	COR724-2	Δ	380 V	8.9 A	4.6 KW	2935 rpm	
16	" 1	"	"	"	"	"	"	
17	SOLUTION PUMP 2	COR626-2	Δ	380 V	6.6 A	3.3 KW	2900 rpm	
18	" 1	"	"	"	"	"	"	
19	NH <sub>3</sub> CONDENSATE 1	COR523-4	Δ	380 V	4.4 A	2 KW	1425 rpm	
20	" 2	COR523-4	Δ	380 V	4.45 A	2 KW	1420 rpm	
21	N <sub>2</sub> COMP	COR726-4	Δ	380 V	14.1 A	6.8 KW	1445 rpm	







BAGGING PLANT

NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
1	AIR FAN	1MA 2066-2BA	Δ	380 V	6.6 A	3.3 KW	2900 rpm	
2	DISCHAGE CONVEYER	COR824-4	Δ	380 V	20.4 A	10 KW	1455 rpm	
3	BUCKET ELEVATER	"	"	"	"	"	"	
4	BAG CONVEYER 1	13-6KH	Δ/Y	220/ 380 V	2.6/ 1.5 A	0.4 KW	1340 u/min	
5	" 2	"	"	"	"	"	"	
6	" 3	"	"	"	"	"	"	
7	LUMP CRUSHER	COR1126-4	Δ	380 V	28 A	13.5 KW	1460 rpm	
8	AIR HEATER							
9	LIFT	COR824-4	Δ	380 V	20.4	10 KW	1455 rpm	
10	SCREW 1							
11	FAN FOR DUST COLBETING							
12	SCREW 2							
13	REVERSIBLE LOADING I	PT242	Δ/Y	220/ 380 V	5.9/ 3.4 A		1425 rpm	
14	" II	"	"	"	"		"	
15	CONVEYER BELT	1MA 2053-4BA	Δ	380 V	4.4 A	2 KW	1425 rpm	
16	BAG CONVEYER BELT 1	1MA 2054-4BA	Δ	380 V	6.3 A	2.8 KW	1420 rpm	
17	BAG CONVEYER 2	"	"	"	"	"	"	
18	" 3	"	"	"	"	"	"	
19	" 1	"	"	"	"	"	"	
20	BAG CONVEYER BELT 1	COR624-4	Δ	380 V	6.7 A	3 KW	1425 rpm	
21	" 2	"	"	"	"	"	"	



FEED WATER PLANT

NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
1	PUMP NaOH	COR624-4	Δ/Y	220/ 380 V	11.6/ 6.7 A	3 KW	1425 rpm	
2	HYDRAZING DOSING PUMP	DKF6406- 163	Y	380 V	0.78 A		1325 rpm	
3	WATER PUMP I	KM160L/4	Δ/Y	220/ 380 V	54/ 30.8A	15 KW	1450 rpm	
4	" II	"	"	"	52.6/ 30.4A	"	"	
5	DRAIN PUMP	COR626-4	Δ	380 V	7.9 A	3.6 KW	1430 rpm	
6	CONDENSATE PUMP	COR1324-2	Δ	380 V	31 A	16 KW	2955 u/min	
7	PUMP 1006/2	1MA 2066-2BA	Δ	380 V	6.6 A	3.3 KW	2900 rpm	
8	PUMP 1006/1	"	"	"	"	"	"	
9	FEED WATER PUMP 1	COR1526-2	Δ	380 V	48 A	25 KW	2960 u/min	
10	" 2	"	"	"	"	"	"	

## WATER TREATMENT PLANT

NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
1	AGITATOR CaOH <sub>2</sub>	1LA-2046-6AA	Δ/Y	220/ 380 V	5.5/ 3.2A	1.1 KW	910 rpm	
2	BOOSTER PUMP 2	OR1326-2		380 V	43 A	22 KW	2945 u/min	
3	" 3	"	"	"	"	"	"	
4	" 4	"	"	"	"	"	"	
5	" 1	"	"	"	"	"	"	
6	AGITATOR FOR FLOWLATOR	CB/3-4D	Δ/Y	380/ 660 V	15.6/ 8.9 A	7.5 KW	1440 u/min	
7	ROTARY COMP	OR1526-2	Δ/Y	220/ 380 V	100/ 58 A	30 KW	2945 u/min	
8	DOSING PUMP FeCl <sub>3</sub> 2	1LA2035-4	Δ/Y	220/ 380 V	2.6/ 1.5 A	0.55 KW	1380	
9	" 3	"	"	"	"	"	"	
10	AGITATOR FeCl <sub>3</sub>	1LA-2044-4AA	Δ/Y	220/ 380 V	4.8/ 2.8 A	1.1 KW	1400 u/min	
11	DOSING PUMP 1	1LA2036-4AA	Δ/Y	220/ 380 V	3.4/ 1.95A	0.75 KW	1400 u/min	
12	AGITATOR CaOH <sub>2</sub> 2	1LA2046-6AA	Δ/Y	220/ 380 V	5.5/ 3.2 A	1.1 KW	910 rpm	
13	DOSING PUMP Ca(OH) <sub>2</sub>	1LA2036-4AA	Δ/Y	220/ 380 V	3.4/ 1.95A	0.75 KW	1400 rpm	



## AMMONIUM SULPHATE

NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
1	DOSING PUMP	DF06-4EXC	Δ/Y	220/ 380 V	1.3/ 0.75A	0.25 KW		
2	DRIVE WITH COOLING ZONE FAN	COR726-6	Δ	380 V	9.7 A	4.0 KW	960 rpm	
3	DRIVE ANMLAR TRAY SYSTEM	COR626-6	Δ	380 V	4.9 A	1.9 KW	930 rpm	
4	CONVEYER BELT UNDER THE DRIVER	D142-116	Y	380 V	3.8 A	1.7 KW	1410 u/min	
5	CONVEYER BELT UNDER THE CONTRIFUGE	COR624-4	Δ	380 V	6.0 A	2.7 KW	1430 rpm	
6	OIL PUMP FOR CENTRIFUGE II	COR226-4	Δ/Y	220/ 380 V	1.9/ 1.1 A	0.37 KW	1365 rpm	
7	" I	"	"	"	"	"	"	
8	CENTRIFUGE NO.1	COR1326-4	Δ	380 V	40 A	20 KW	1465 rpm	
9	" NO.2	"	"	"	"	"	"	
10	AXIAL FAN	COR626-2	Δ	380 V	6.6 A	3.3 KW	2900 rpm	
11	SULPHURIC ACID PUMP 1	COR626-4	Δ	380 V	7.9 A	3.6 KW	1430 rpm	
12	" 2	"	"	"	"	"	"	
13	FAN	COR1526-4	Δ	380 V	7.9 A	2.7 KW	1475 rpm	
14	HOT BLOWER	1MA 2035-4CA	Δ/Y	220/ 380 V	2.54/ 1.47A	0.55 KW	1390 rpm	
15	LYE PUMP UNDER THE SATURATOR 1	COR726-4	Δ	380 V	14.1 A	6.8 KW	1445 rpm	
16	" 2	"	"	"	"	"	"	
17	LYE PUMP AT THE LYE TANK I	COR724-4	Δ	380 V	10.5 A	5 KW	1445 rpm	
18	BUCKET ELEVATOR	COR624-4	Δ	380 V	6.0 A	2.7 KW	1430 rpm	
19	CONVEYER BELT FOR AS 1	COR724-4	Δ	380 V	10.5 A	5 KW	1445 rpm	
20	" 2	COR726-4	Δ	380 V	14.1 A	6.8 KW	1445 rpm	
21	LYE PUMP AT THE LYE TANK II	COR724-4	Δ	380 V	10.5 A	5 KW	1445 rpm	



SULPHURIC ACID PLANT

NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
1	ACID PUMP DRYING TOWER	OR828S-4	Δ	380 V	30.3 A	15 KW	1450 rpm	
2	ACID PUMP DRYING	"	"	"	"	"	"	
3	"	"	"	"	"	"	"	
4	PRODUCTION PUMP 2	COR1526-4	Δ	380 V	57 A	30 KW	1470 rpm	
5	" 1	"	"	"	"	"	"	
6	ABSORPTION PUMP 3	OR1326-4	Δ	380 V	43 A	22 KW	1460 rpm	
7	" 1	"	"	"	"	"	"	
8	" 2	"	"	"	"	"	"	
9	BURNNER AIR BLOWER	824-2		380 V	21.6 A	1.1 KW		
10	MOTOR VALVE VELOA	ORB126-4V	Δ/Y	220/ 380 V	1.1/ 0.63A	0.18 KW	1320 rpm	
11	" LOW	OR226-6	Δ/Y	220/ 380 V	1.5/ 0.86A	0.25 KW		
12	BETY VENTILATION AIR							
13	MAIN AIR FAN 1	OR1992-4D	Δ	380 V	370 A	200 KW	1480 rpm	
14	" 2	"	"	"	"	"	"	
15	CONDENSATE PUMP 1	GD233	Δ/Y	220/ 380 V	4.5/ 2.6 A	1.1 KW	1430 rpm	
16	" 2	"	"	"	"	"	"	
17	FUEL PUMP 1	2046-2AA	Δ	380 V	3.7 A	1.5 KW	1410 rpm	
18	" 2	"	"	"	"	"	"	
19	AGITATOR MIXING VESSEL	COR523-6	Δ	380 V	1.0 A	1.3 KW	925 rpm	
20	S-PUMP MIXING	COR523-4	Δ	380 V	5.1 A	2.2 KW	1410 rpm	



NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
21	S-IMERSION PUMP 1	COR426-4	Δ	380 V	3.7 A	1.5 KW	1410 rpm	
22	" 2	626-4	Δ	380 V	8.7 A	4 KW	1430 rpm	
23	" 3	COR726-4	Δ	380 V	15.6 A	7.5 KW	1440 rpm	
24	ROTARY MIXER 1	OR1326-6	Δ	380 V	31 A	15 KW	970 rpm	
25	SULPHUER AGITATOR	COR1526-4	Δ	380 V	57 A	30 KW	1470 rpm	
26	IMMERSION DRAIN PUMP							
27	CRANE MOTOR 1	ZKK180M-418	Y/Y	380 V	19/12 A	9.5/4.8 KW	1450/710	
28	CHAIN MOTOR 2	"	"	"	"	"	"	
29	" 3							
30	" 4	ME10	Δ/Y	220/380 V	0.52/0.3 A	8.5 W	2780 u/min	
31	" 5	"	"	"	"	"	"	
32	" 6							
33	DRAIN PUMP							



## STORAGE

NO	SERVICE	TYPE	CONNECTION	VOLT	AMP	CAPACITY	RPM	REMARKS
1	MOTOR SCHAPER 1	OR724-40H		380 V	11.1 A	5.5 KW	1440 u/min	
2	" 2	"		"	"	"	"	
3	MOTOR CONVEYER	DT343	Δ/Y	220/ 380 V	8.5 4.9 A			
4	MOTOR SCHAPER	"	"	"	"			
5	MOTOR SWING	19/11K-8	Δ/Y	220/ 380 V	6.5/ 3.75A	0.9 KW	720 u/min	
6	CONVEYER SCHAPER	OR1324-4		380 V	3.7 A	18.5 KW	1460 u/min	
7	FAN MOTOR	4NGA F12/5	Δ/Y	220/ 380 V	1.7/ 1.0 A	0.37 KW	1400 u/min	
8	MOTOR ON SCHAPER	24-14-K4	Δ/Y	220/ 380 V	35/26/ 22.5A	9/6.4/ 5.2 KW	1400/ 1420/ 1430 u/min	
9	LIFT	HN30CAR4/ 16		380 V	22/13 A	8.8 KW	1400/ 3300 rpm	
10	DRUM MOTOR	DT343	Δ/Y	220/ 380 V	3/1.05 A		50 rpm	





JICA