Drg. No.	SHT-1 OF 3
S21001-XG01-05HSD-227101	

DESCRIPTION	SYMBOL
GATE VALVE(OPEN) (GV)	
GATE VALVE(CLOSED) (GV)	
BALL VALVE(OPEN) (BV)	
BALL VALVE(CLOSED) (BV)	
CHECK VALVE (NRV)	
SELF ACTUATED PR. CNTRL. VLV (PCV)	
MULTI LOUVRE DAMPER	
SOLENOID OPERATED PNEUMATIC ON OFF VALVE (SV)	S VALVE/DAMPER
PNEUMATIC ACTUATED CONTROL VALVE	VALVE/DAMPER
MOTORIZED VALVE	M VALVE/DAMPER
DRAIN FUNNEL (DF)	
ATMOSPHERIC VENT	
ECCENTRIC REDUCER	
EXPANSION JOINT	
CONCENTRIC REDUCER (CONC. RED)	

DESCRIPTION	SYMBOL
GAS LINE	
LIQUID LINE	
INSTRUMENT AIR LINE	

INSTRUMENT DESIGNATIONS

PI	PRESSURE INDICATOR
LI	LEVEL INDICATOR
PT	PRESSURE TRANSMITTER
LS	LEVEL SWITCH
ZSO	LIMIT SWITCH OPEN
ZSC	LIMIT SWITCH CLOSE
DPT	DEFERENTIAL PRESSURE TRANSMITTER
FT	FLOW TRANSMITTER
TE	TEMPERATURE
CT	CONCENTRATION TRANSMITTER
pHT	pH TRANSMITTER
TI	TEMPERATURE

INSTRUMENT TAG NUMBERING SYSTEM

50–XXX–NN–XX–NNN

- SERIAL NO.
- INSTRUMENT CODE
- KKS SYSTEM NUMBER
- CODE
- UNIT NOS

EQUIPMENT NUMBERING SYSTEM

XXXXX

- REFER KKS NUMBER SYSTEM

PIPE LINE NUMBERING SYSTEM

50–XXX–NN–XX–NN–XXX–XXX

- SIZE
- MOC
- SERIAL NO.
- SERVICE CODE
- KKS SYSTEM NUMBER
- KKS SYSTEM CODE
- UNIT NOS

VALVE NUMBERING SYSTEM

50– XXX–NN–XX–NNN

- SERIAL NO.
- VALVE CODE
- NUMBER
- KKS SYSTEM CODE
- UNIT NOS

GENERAL INSTRUMENT OR FUNCTION SYMBOLS

ITEMS \ LOCATION	CENTRAL CONTROL FACIA	FIELD
DISCRETE INSTRUMENT		○
PLC DISPLAY	▢	
PLC FUNCTION	◇	

KKS EQUIPMENT CODE	NAME OF EQUIPMENT
AQ	DAMPER
AY	EXPANSION JOINTS
AA	VALVES
BR	PIPES
AN	BOOSTER FAN
AD	SPRAY NOZZLES
BB	TANKS
AP	PUMPS
MA	MOTORS
LS	LEVEL SWITCH
CL	LEVEL GUAGE
CP	PRESSURE TRANSMITTER/INDICATOR
TE	TEMPERATURE ELEMENT/INDICATOR
TI	TEMPERATURE ELEMENT/INDICATOR
PH	ph TRANSMITTER
CT	CONCENTRATION TRANSMITTER
AT	FILTERS

KKS CODES	FGD & SAC- MAJOR PUMPS
50GNK14AP001	PROCESS WATER PUMP-A
50GNK15AP002	PROCESS WATER PUMP-B
50PBL11AP003	FRESH WATER PUMP-A
50PBL12AP004	FRESH WATER PUMP-B
50HSM11AP005	FGTR MODULE WASH PUMP-A
50HSM12AP006	FGTR MODULE WASH PUMP-B
50HSM21AP007	EFFLUENT TRANSFER PUMP-A
50HSM22AP008	EFFLUENT TRANSFER PUMP-B
50GNK11AP009	PUMP TO CLIENT SERVICE-A
50GNK12AP010	PUMP TO CLIENT SERVICE-B
50HSM35AP011	SAC INLET PUMP-A
50HSM36AP012	SAC INLET PUMP-B
50GNK11AP013	SAC RECOVERED WATER PUMP-A
50GNK12AP014	SAC RECOVERED WATER PUMP-B
50GNE23AP015	SAC START UP/RECIRCULATION PUMP-A
50GNE24AP016	SAC START UP/RECIRCULATION PUMP-B
50GNE21AP017	95% ACID LOADING PUMP-A
50GNE22AP018	95% ACID LOADING PUMP-B

RW	RAW WATER/FRESH WATER
PW	PROCESS WATER(ACIDIC) FROM MCU
AW	ACIDIC WATER FROM FGTR
UG	UNTREATED FLUE GAS TO BOOSTER FAN
UG	UNTREATED FLUE GAS FROM BOOSTER FAN TO MCU
TG	TREATED FLUE GAS FROM MCU TO FGTR
CG	SO2 REDUCED CLEAN FLUE GAS FROM FGTR TO WET STACK
FD	FLUE GAS DUCT DRAIN
MD	MCU HOPPER DRAIN
RD	FGTR HOPPER DRAIN
IA	COMPRESSED AIR/ INSTRUMENT AIR
PA	PLANT AIR/SERVICE
MP	AUXILIARY MP STEAM FOR SAC PLANT
HP	AUXILIARY HP STEAM FOR SAC PLANT
CH	CONDENSATE FOR SAC PLANT(HP)
CP	CONDENSATE FOR SAC PLANT(MP)
VP	VAPOUR
MW	MAKE UP WATER FOR SAC

KKS CODES	FGD & SAC- MAJOR TANKS
50PBL10BB001	FRESH WATER TANK
50GNK13BB002	PROCESS WATER TANK
50PBL20BB003	OVERHEAD OR EMERGENCY TANK
50GNK10AA007	NEUTRALIZING TANK
50HSM34BB004	EFFLUENT STORAGE TANK
50GNK10BB005	SAC RECOVERED WATER TANK
50GNE20BB006	95% ACID STORAGE TANK

ISSUED FOR	APPROVAL ☐	INFORMATION ☐	MANUFACTURING ☐	CONSTRUCTION ☐	AS-BUILT ☐

REV.	DATE	DESCRIPTION OF REVISIONS	DRAWN	CHECKED	APPR'D
00	17/03/22	FIRST ISSUE	MB	IR	BCB

Owner:
HINDALCO INDUSTRIES LIMITED
Ahura Centre, 1st Floor, B Wing, Mahakali Caves Road, Andheri (East),
Mumbai - 400 093, India

EPCM Contractor:
W. L. GORE & ASSOCIATES (Pacific) Pte, Ltd. India Branch
703, A-Wing, 215 Atrium, Andheri Kurla Road,
Mumbai - 400059, India

Nominated Subcontractor - Engineering, Quality Control, Supervision:
SMARTLuth Solution and Service Pvt. Ltd.
Unit No: 503, 5th Floor, ECO Centre,. EM-4 Sector-V, Salt Lake City,
Kolkata - 700091, India

REV.	ZONE	DRN/DT	CHD/DT	APPD/DT	DESCRIPTION	DESIGNED	CHECKED	APPROV.	REV.	DATE
REVISION										

RELEASE STATUS	DATE	SIGNATURE
PRELIMINARY		
FOR TENDER ONLY		
FOR CONSTRUCTION		
REVIEWED: ARCHITECTURAL		
REVIEWED: CIVIL & STRUCTURAL		
REVIEWED: ELECTRICAL		
REVIEWED: INSTRUMENTATION		
REVIEWED: MECHANICAL		

Hindalco Renusagar U5 1x80 MW PF Captive Power Plant
Flue Gas Desulfurization Project (FGD) with GORE™ SO_2 Control System

LEGEND

PIPING & INSTRUMENTATION SYMBOL

Drg. No. S21001-XG01-05HSD-227101
GORE No. RPDU5.MP.010 SH 1 OF 3
GORE Job No. RPDU5 SCALE: NTS
File:

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