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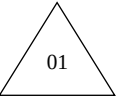
Tabulation of Revised Page

Sheet	Revisions							Sheet	Revisions						
	00	01	02	03	04	05			00	01	02	03	04	05	
1	X	X						31							
2	X	X						32							
3	X	X						33							
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Introduction

“Nominal” and “Design” capacity of the project is equal to 2340 depth and 2700 depth fresh ore feed conditions respectively. The plant is “Designed” to accommodate the “Maximum” conditions.

MV Cable Data sheet				
Item	Description	Unit	Purchaser Requirements	Vendors Response
1	General Data			
1.1	Vendor's Name	-	VTs	
1.2	Reference standard:(e.g. NFC, IEC, BS, etc)	-	IEC 60840/60228/60332-1 (26/45/52kv Cables) IEC 60502-2/60228/60332-1 (6/10/12 Cable)	
1.3	Applicable specification:	-	12002-D-EL-SPC-303-GNL-017 12002-D-EL-ITP-303-GNL-090	
1.4	Reference Documents		Power and Control Cable List for Stockpile Area 12002-D-EL-LIT-303-STP-231 Power and Control Cable List for Grinding Area 12002-D-EL-LIT-303-GRD-331 Power and Control Cable List for Flotation Area 12002-D-EL-LIT-303-FLO-388 Power and Control Cable List for Moly Area 12002-D-EL-LIT-341-MOL-508 Power and Control Cable List for Lime and Reagent Area 12002-D-EL-LIT-303-RGT-556 Power and Control Cable List for Dewatering Area 12002-D-EL-LIT-303-DWT-596	
2	Environmental Conditions			
2.1	Location of installation			
2.2	Installation: (Underground/Above ground)		Underground/Above ground	
2.3	Hazardous area classification		Safe Area	
2.4	Altitude	m	2500 meters above sea level	
2.5	Maximum ambient temperature:	°C	40	
2.6	Minimum ambient temperature:	°C	-25	
2.7	Installation condition (Direct buried/ Concrete trench)		Concrete trench/Cable Ladder	
2.8	Maximum humidity	%	23%~70%	
2.9	Corrosive atmosphere		No	
2.10	Thermal resistivity of soil	K.m/W	1.5	
2.11	Seismic condition		0.3g	
3	Technical Data			
3.1	Service voltage	kV	6.6 / 33	
3.2	Max. Withstand Voltage	kV	6/10 (12) kV, 26/45 (52) kV	
3.3	Insulation withstand Voltage (power frequency)	kV	ACC.to IEC	
3.4	Rated Frequency	Hz	50HZ	
3.5	Grounding System (TT, TNS, IT)		TNS	
3.6	Voltage variations (+/- % of Ur)	%	±10	
3.7	Frequency variations (+/- % of Fr)	%	± 5	

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MV Cable Data sheet				
Item	Description	Unit	Purchaser Requirements	Vendors Response
3.8	Conductor Material (CU/AL)		CU/Stranded and annealed copper conductor	
3.9	Conductor Purity	%	Acc. to IEC 60228	
3.10	Insulation Material		XLPE	
3.11	Filler Material		Extruded PVC or Poly Propylene with sheath (For multi core cables)	
3.12	Bedding Material		PVC	
3.13	Armored Material (Galvanized steel/Aluminum) (In case of application)		Armour for three core cables: Galvanized steel wire Armour for single core cables: Aluminum wire	01
3.14	Over sheath insulation		PVC-ST2	
3.15	Lead cover requirement	Yes/No	NO	
3.16	Over sheath Material/ Color		PVC/Red	
3.17	Flame retardant requirement	Yes/No	Yes	
3.18	Low Smoke requirement	Yes/No	Yes	
3.19	Low production of corrosive and toxic gas.	Yes/No	Yes	
3.20	Anti UV requirement	Yes/No	Yes	
3.21	Anti-rodent requirement	Yes/No	Yes	
3.22	Oil resistance	Yes/No	No	
3.23	Core Color coding		Black for Single-core Black, Red and Brown for 3 cores	
3.24	Conductor class		Class 2 (RM)	
3.25	Fire resistance requirement	Yes/No	No	
3.26	Semiconductive layer		Extruded layer of semi-conductive material between conductor and insulation and between insulation and screen	
3.27	Cable cross section	mm ²	Acc. to the Electrical Cable Lists Mentioned in Row 1.4	01
3.28	No. of Cores		Acc. to the Electrical Cable Lists Mentioned in Row 1.4	
3.29	Cable Types:			
3.30	33KV Cable Type (N2XSY for Single core cables)		CU/SC/XLPE/SC/SCT/CWS/PVC CU/SC/XLPE/SC/SCT/CWS/AWA/PVC (If required)	
3.31	6.6 KV Cable Type (N2XSY for Single core cables)		CU/SC/XLPE/SC/SCT/CWS/PVC CU/SC/XLPE/SC/SCT/CWS/AWA/PVC (If required)	01
3.32	6.6 KV Cable Type (N2XSEY for Multi core Cables)		CU/SC/XLPE/SC/SCT/ICWS/PVC CU/SC/XLPE/SC/SCT/ICWS/SAWA/PVC (If required)	
3.33	6.6 KV Cable Type (N2XCY for VFD's)		CU/SC/XLPE/SCT/ICWS/OCTS/PVC	
4	Physical Characteristics: (to be completed by the VENDOR)			
4.1	Cable Type		VTS	
4.2	Cable Abbreviated Description		VTS	
4.3	CONDUCTOR:			
4.3.1	Material	-	VTS	
4.3.2	Voltage Rating (U0/U/Um)	KV	VTS	
4.3.3	No. of cores	-	VTS	
4.3.4	Conductor cross section	mm ²	VTS	

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MV Cable Data sheet				
Item	Description	Unit	Purchaser Requirements	Vendors Response
4.3.5	Cores construction (Plain/shaped/circular)		VTs	
4.3.6	Diameter	mm	VTs	
4.3.7	Cores color	-	VTs	
4.3.8	conductor weight	kg	VTs	01
4.4	CONDUCTOR SCREEN:			
4.4.1	Material	-	Extruded Semi-Conductor	
4.4.2	Thickness	mm	VTs	
4.4.3	Curing process		VTs	
4.5	INSULATION			
4.5.1	Material	-	XLPE	
4.5.2	Nominal Thickness	mm	VTs	
4.5.3	Application Method	-	VTs	
4.5.4	Curing process	-	VTs	
4.6	INSULATION SCREEN:			
4.6.1	Material	-	Semi-Conductor	
4.6.2	Thickness	mm	VTs	
4.6.3	Application Method	-	Extruded	
4.6.4	Curing process	-	VTs	
4.6.5	Water blocked Semi-Conducting Tape Thickness	mm	VTs	
4.7	METALLIC SHIELDING WIRE SCREEN			
4.7.1	Shape		VTs	
4.7.2	Material & Type		Copper Wire screen and Copper tape Helically	
4.7.3	Equivalent Cross-Section	mm ²	VTs	
4.7.4	Copper Wire Screen Dimension	mm	VTs	
4.7.5	Polyester Tape Thickness	mm	VTs	
4.8	FILLER: (For Multi core Cables)			
4.8.1	Material		Low Smoke PVC	
4.8.2	Thickness	mm	VTs	
4.9	OUTER SHEATH:			
4.9.1	Material	-	PVC (ST2, UV Resistant, Flame Retardant, Low Smoke)	
4.9.2	Thickness	mm	VTs	
4.9.3	color	-	Red	
4.9.4	Application Method	-	Extruded	
4.10	Approx. Overall diameter of Completed Cable		VTs	
4.11	Max. bending radius factor		VTs	
4.12	Min bending radius	mm	VTs	
4.13	Max. Pulling Force/Per Cable	N	VTs	
4.14	Approx. Weight of Cable	kg/km	VTs	
4.15	Max. DC resistance of Conductor @ 20°C	Ω/km	VTs	
4.16	Max. AC resistance of Conductor @ 90°C	Ω/km	VTs	

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MV Cable Data sheet				
Item	Description	Unit	Purchaser Requirements	Vendors Response
4.17	Reactance	Ω/km	VTs	
4.18	Capacitance	$\mu\text{F}/\text{km}$	VTs	
4.19	Max. Current Rating of Cable in the Following Condition:			
4.19.1	Depth of Laying	m	0.8	
4.19.2	Thermal Resistance of soil	$^{\circ}\text{C}.\text{m}/\text{W}$	1.5	
4.19.3	Soil Temperature	$^{\circ}\text{C}$	20	
4.19.4	Air Temperature	$^{\circ}\text{C}$	30	
4.19.5	Current rating in Ground	A	VTs	
4.19.6	Current rating in Air	A	VTs	
4.20	Max. Short circuit rating @1 Sec:			
4.20.1	Conductor Initial temperature 90°C and final temperature 250°C	KA	VTs	
4.20.2	Screen Initial temperature 50°C and final temperature 250°C	KA	VTs	
4.21	Max. Conductor Temperature:			
4.21.1	Continuous Current	$^{\circ}\text{C}$	90	
4.21.2	Short Circuit	$^{\circ}\text{C}$	250	
5	Drum Characteristics: (to be Completed by the VENDOR)			
5.1	Drum Material	-	VTs	
5.2	Drum dimension		VTs	
5.3	Max Cable length on drum	m	VTs	
5.4	Min Cable length on drum	m	VTs	
5.5	Total weight	kg	VTs	
5.6	Min. cable installation temperature	$^{\circ}\text{C}$	VTs	
6	Cable Marking (At least the following information shall be printed on the outer sheath of the cables, at reasonable intervals acc. to manufacturer standard)			
6.1	Manufacturer's name		VTs	
6.2	Year of Manufacture		VTs	
6.3	Type of Insulation		VTs	
6.4	Rated Voltage		VTs	
6.5	Number of Cores		VTs	
6.6	Size of Conductors		VTs	
6.7	Cable Length		Per Meter	01
7	Cable Tests & Inspection			
7.1	ITP for HV/MV Cable		Refer to Doc No. 12002-D-EL-ITP-303-GNL-090 At a minimum, the following tests shall be applied: - Routine Test - Conductor Resistance Measurement - High Voltage Power Frequency - Insulation Resistance Measurement - Partial Discharge	01

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Note: ITP & QCP will be finalized after P.O in PIM Stage.

- 1- VTS: Vendor To Specified
- 2- VENDOR shall complete the datasheet according to voltage level, cable sizes and types in separate sheets.

Minimum cable size for MV cables is 50mm²