



**Clarifications dated 30.04.2016 to  
Tender No. 1070C16011 dated 07.04.2016 for  
BASIC DESIGN & DETAILED ENGINEERING, PROCUREMENT, SUPPLY, FABRICATION, TRANSPORTATION, STORAGE,  
CONSTRUCTION, INSTALLATION, TESTING, PRE-COMMISSIONING, COMMISSIONING ON SINGLE POINT  
RESPONSIBILITY BASIS FOR MRPL-OMPL POWER INTEGRATION WORKS**



Clarifications to Tender No. 1070C16011 dated 07.04.2016 are as follows:

**Date:  
30-Apr-2016**

Sl	Queries	Clarifications
1	Clause no. 2.8(1) ground fault current value with the duration. We request you to provide the values for the same.	For 33 kV Earthed System [33 kV (E) for 19 kV / 33 kV voltage grade cables], the single line to ground fault-current / duration will be 31.5 kA for 0.2 seconds and Consider the Single line to ground fault current to be carried by copper screen as 0.7kA for 1 sec. for each core.
2	As per Clause no.2.2 of LT – XLPE cable after insulation screened is required. In our normal practice, screening is not provided for the 1.1 kV Cable. We request you to clarify & confirm the requirement.	LT power cables for lighting & auxiliary power supplies need not be screened. However the LT control cables may either be of screened / shielded type or twisted pair type. Especially the control cables laid for upstream - downstream interlocks - wherein the voltage drop & interference limitations are stringent. In any case the onus lies with the contractor to ensure that all hard - wired signals are accurately relayed from one end (CPP-III at MRPL) to the other (OMPL S/S - 1A) & vice versa. There must not be any induction effect on the control cables leading to spurious tripping of breakers as the control & power cables are laid together in a single directly buried trench & not separate trench.
C	LT cable specification provided is for XLPE cables. We request you to reconfirm the requirement.	Same shall be XLPE as per the tender specifications.
D	OFC cable specification has not been provided. Please provide the same.	The Optical Fibre Cables are required for Pilot Wire - Line Differential Protection feature. Hence ideally, it should be the Line Differential Relay OEM who stipulates the OFC specifications. As per our tender requirement, differential protection relay shall be Siemens Siprotec make. Details of the OFC cable specifications required for the same can be found in the relay manual. Further to the other general specifications of the FO cable, attached specification can be seen.

All other terms & conditions, stipulations, specifications etc. of tender document issued earlier shall remain unaltered. This forms an integral part of bidding document. Bidders are requested to take cognizance of the same and submit their bid accordingly. Bidders are requested to submit the copy of this document duly signed and stamped along with the bid ( in the techno commercial part) as the token of acknowledgement & acceptance of the same.

*Saurabh Bhardwaj*

**Single-mode Fiber Optic Cable (Armoured) Specifications :**

The OFC Construction shall be of loose tube type with one fiber per tube. The OFC must have minimum 6 single-mode fibers of type as per relay requirement.

The fibers / cores shall be coated in different colours to facilitate fiber identification. The cable shall have central strength member, inner & outer sheaths, armour & moisture barrier layers.

The cable mechanical characteristics must conform to IEC 60794 specifications. The armoring of the OFC shall be with corrugated steel tape (electrolytically chrome plated low carbon steel).

The outer sheath shall be of flame retardant material with Oxygen Index of 29 or more, with adequate length markings indicating the type of cable.

All relevant factory test-reports are to be submitted along with the consignment of new Optical Fiber Cables.

Ideally, the OFC must be suitable for functioning over a high bandwidth range with low attenuation and must be bend-insensitive.

The fiber optic cables are to be supplied ideally in wooden drums of 3 or 6 km lengths each – to avoid multiple joints.