

Purchase Specification AE System

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Sl No	Specification	Requirement
1.	Description	Acoustic Emission CRIMP Package: A complete 1-channel AE System (Threshold Independent, Optimized for insulator end fitting crimping) for online assessment of Crimping quality.
2.	Purpose	On line inspection of insulator during crimping process by using Acoustic Emission Technique.
3.	Scope of Supply	Two years trouble free maintenance spares to be supplied along with the main equipment.
4.	Qualification Criteria	Should in use by minimum of two Composite Insulator manufacturing company in India manufacturing CLR insulator of 400kV (min) and up to 420kN rating.
5.	Erection & commissioning	AE system has to be fixed in the available UNIFLEX crimping machine with BHEL suitably and parameters should be optimized accordingly by supplier to achieve accurate, repeatable and reproducible data /Results.
6.	Power Supply	Suitable to 220V 50Hz ac power supply.
7.	Operations Training / Demonstration	Necessary operating and maintenance training/demonstration should be given.
8.	Any other information	Supplier can furnish any other additional information, additional features of the instrument will considering the overall requirements
9.	Bill of material	
	Component	Pcs
	Data Acquisition system	1
		Description of the part
		1-Channel A E System (Threshold independent), Optimized for insulator end fitting Crimping, comprises
		- Data acquisition unit - USB Cable (2 meter minimum) - Control and analysis software for online analysis
	Hardware	1
		Acoustic Signal Conditioner, frequency range 240-710 KHz, Low pass filter 1 pole, 86 Hz
	Cables	1
		Dedicated Cable from Data Acquisition system hardware to pressure transducer, length 1.5m, 15-pole Sub D connector (male) on data acquisition system side & free wires on transducer side. Measurement range $\pm 5V$ (min)
	Sensor cable	1
		Compatible Cable sensor to the system, cable length 1.2 m, with compatible sensor, with suitable connector. Temperature withstand capacity : upto 180°C
	Sensor	1
		AE Sensor, wide band 400 kHz-800kHz or wider covering the same range, Metal Face with magnetic holder arrangement, nominal dia 20.5 mm with suitable coupling agent available locally.
	AE Calibration and Simulators: Signal Source	1
		Package of 5 pieces of Hsu-Nielsen Sources (pencils) each with shoe according to ASTM E976 for 0.5 mm lead with packages containing 12 pencil leads 0.5mm
	Sensor fixing	
		Sensor fixing arrangement should be removable and reattachable.
	Manual	1
		User Manual consisting, operation , maintenance , principal, CD consisting software
	Computer	1
		800MHz, CPU, 3GB RAM, 1TB Free Hard Disc Space compatibles to the system.

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