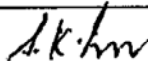


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	A4 - 12	PURCHASE SPECIFICATION GROUP : DRIVES & POWER SUPPLIES				P.S NO. : PS/441/164
						REV. NO : 01
						PAGE 00 OF 03
		REVISION HISTORY SHEET				
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.	REV. NO.	DATE	NATURE OF CHANGE	REASONS	PREPARED BY	APPROVED BY
	00	12-09-2000	FIRST ISSUE	-----	C N KUMAR	H C VARADARAJ
	00	09-06-2005	INSULATION COVERING PERCENTAGE REVISED & SPECIFICATION GENERALY REVISED.	TO IMPROVE CABLE LIFE.	C N KUMAR	S K IYENGAR
REVISIONS				APPROVED BY  S K IYENGAR		
				PREPARED BY  C N KUMAR	ISSUED BY D & PS	DATE 12-09-2000

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 A4 - 10	PURCHASE SPECIFICATION GROUP : DRIVES & POWER SUPPLIES		P.S NO. : PS/441/164	
			REV. NO : 01	
			PAGE 01 OF 03	
SPECIFICATION FOR INDUCTION HEATING ANNEALING CABLE				
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	2. Cable Rating	: 1200 Amps. At 3000 HZ		
	3. Conductor	: 0.3 mm Dia. Super enameled special Electrical grade Flexible annealed copper wire as per IS : 4800		
	4. DC Resistance of each wire at 20°C	: 0.2289Ω/Meter (max.) as per IS : 8130 - 1984		
	5. No. of Wires	: 3360		
	6. No. of Strands	: 20		
	7. Insulation of each strand	: Each strand is taped over entire length with Fibre glass tape of 0.08mm (nom.) and to be covered 100%.		
	8. Braiding	: Each strand should be braided with 1mm Asbestos on entire length.		
	9. Transposing	: All 20 strands thus laid and transposed in the shape of rope as 1+7+12.		
	10. DC Resistance of strands at 20°C as per IS : 8130	For single strand	: 1.59Ω/KM (max.)	
		For five strands	: 0.322Ω/KM (max.)	
		For twenty strands	: 0.0801Ω/KM (max.)	
	11. Inner sheath	: 100% covering with one layer of 1.0mm dia. Asbestos yarn to withstand upto 400°C.		
	12. Inner sheath cover	: 100% covering with Teflon tape of 0.05mm (nom.) thickness over inner sheath on entire length.		
	13. Inner sheath braiding	: Inner sheath to be braided 70% (approx.) covering with bare annealed copper wire of 0.3mm (nom) over the Teflon tape.		
14. Outer sheath braiding	: 100% covering with two layers of Asbestos yarn of 1.0 mm dia. to withstand temperature of 400°C			
15. Length of cable	: 15 Metres.			
REVISIONS		APPROVED BY  S K IYENGAR		
		PREPARED BY  C N KUMAR	ISSUED BY D & PS	DATE 12-09-2000

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16. End finishing

: Four ends on each side to be crimped with 4 lugs of 150 Sq. mm copper lugs (long neck) as shown in page 03 of this spec. Near cable ends Teflon taping to be done and binding to be done with Asbestos yarn.

INFORMATION REQUIRED WITH OFFER FOR TECHNICAL ACCEPTANCE

- Cable dimension details.
- Conductor specification.
- Current/Voltage rating.
- Cable construction.
- Thermal insulation capacity.
- Half metre (minimum) long sample cable for technical acceptance.

TESTS TO BE CONDUCTED

- Conductor resistance separately each strand, 5 strands and 20 strands.
- Before crimping the ends, Insulation/continuity between braids to be checked. (There should not be any short between braids)
- Transposition of braids should be checked on a sample piece and braids should be closely transposed.
- HV test (spark test) of 3.0 KV to be done as per IS : 694 - 1990.
- After the above, ends to be crimped with 150 Sq. mm long neck copper lugs as shown on page 03.

ACCEPTANCE CRITERIA

- Visual inspection for any physical damage.
- Conductor dimension (0.3mm $\pm$ 5%).
- Length of cable as per spec.
- Conductor resistance of each strand, 5 strands and 20 strands as per spec.
- HV test (spark test) of 3.0 KV at strand level.
- Copper elongation test (10% minimum).
- Test certificate.

PACKING

Each cable should be rolled separately and covered with suitable cover and tag with following information to be attached to the roll.

- Cable type : INDUCTION HEATING ANNEALING CABLE
- Cable size : 240 Sq. MM
- Cable rating : 1200 AMPS. AT 3000 HZ
- Cable length : 15 METRE.
- BHEL Code No. : PR0900001517

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PURCHASE SPECIFICATION
GROUP : DRIVES & POWER SUPPLIES

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- NOTE :**
- Before crimping each crimp end Enamel upto a length of 40mm to be removed completely using suitable chemical.
 - After removing the Enamel each crimp end to be tinned properly.
 - Tinned ends to be crimped using 150Sq.mm long neck copper lugs with appropriate crimping tool.

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SIZE A4