

**Annexure-A**

**Enquiry Ref: BAP/PUR/PM/9530021E dt.04.04.2013**

<b>SI No</b>	<b>Material Code , Description and Specification</b>	<b>Unit</b>	<b>Quantity</b>	<b>Delivery</b>
01	Non Asbestos Dry Rope <b>Dia 6 MM</b> As Per <b>APSQ – 106 /Rev 00</b>	MR	32000	30.04.2013
02	Non Asbestos Dry Rope <b>Dia 8 MM</b> As Per <b>APSQ – 106 /Rev 00</b>	MR	7000	30.04.2013
03	Non Asbestos Dry Rope <b>Dia 10 MM</b> As Per <b>APSQ – 106/Rev 00</b>	MR	4000	30.04.2013
04	Non Asbestos Dry Rope <b>SQ 8 MM</b> As Per <b>APSQ – 106 /Rev 00</b>	MR	2500	30.04.2013
05	Non Asbestos Dry Rope <b>SQ 10 MM</b> As Per <b>APSQ – 106/ Rev 00</b>	MR	2000	30.04.2013
06	Non Asbestos Dry Rope <b>SQ 12 MM</b> As Per <b>APSQ – 106 /Rev 00</b>	MR	2000	30.04.2013
07	Non Asbestos Dry Rope <b>SQ 20 MM</b> As Per <b>APSQ –106 / Rev 00</b>	MR	3000	30.04.2013
08	Non Asbestos Dry Rope <b>SQ 6 MM</b> As Per <b>APSQ – 106 / Rev 00</b>	MR	2800	30.04.2013
09	Non Asbestos Lubricated Rope <b>SQ 10 MM</b> As Per <b>APSQ-107 /Rev 00</b>	MR	700	30.04.2013

10	Non Asbestos Lubricated Rope <b>SQ 12 MM</b> As Per <b>APSQ-107 /Rev 00</b>	MR	5000	30.04.2013
11	Non Asbestos High Temp Rope <b>Dia 6 MM</b> As Per <b>APSQ-108/Rev 00</b>	MR	50000	30.04.2013
12	Non Asbestos High Temp Rope <b>Dia 10 MM</b> As Per <b>APSQ-108/Rev 00</b>	MR	8000	30.04.2013
13	Non Asbestos High Temp Rope <b>SQ 12 MM</b> As Per <b>APSQ-108/Rev 00</b>	MR	2600	30.04.2013
14	Non Asbestos High Temp Rope <b>SQ 20 MM</b> As Per <b>APSQ-108/Rev 00</b>	MR	5600	30.04.2013
15	Non Asbestos Graphite Sheet <b>1.5 MM</b> <b>thick</b> As Per <b>APSQ-109/Rev 00</b>	SM	150	30.04.2013
16	Non Asbestos Graphite Sheet <b>2 MM thick</b> As Per <b>APSQ-109/Rev 00</b>	SM	150	30.04.2013
17	Non Asbestos Graphite Sheet <b>3 MM thick</b> As Per <b>APSQ-109/Rev 00</b>	SM	700	30.04.2013
18	Non Asbestos Graphite Sheet <b>5 MM thick</b> <b>As Per APSQ-109/Rev 00</b>	SM	150	30.04.2013
19	Non Asbestos Graphite Sheet <b>5 X OD 435</b> <b>X ID 370</b> As Per <b>APSQ-109/Rev 00</b>	NO	3000	30.04.2013
20	Non Asbestos Graphite Cloth <b>3 MM</b> As Per <b>APSQ-110/Rev 00</b>	SM	100	30.04.2013
21	Non Asbestos Graphite Cloth <b>2 MM</b> As Per <b>APSQ-110/Rev 00</b>	SM	50	30.04.2013



**Bharat Heavy Electricals Ltd**  
Boiler Auxiliaries Plant  
Ranipet - 632 406

EDC / AIR PREHEATERS  
**TECHNICAL SPECIFICATION**  
Effective Date: 16.02.2013

Specification No : APSQ - 106      Rev. No : 00      Page No : 01 of 01

<b>1.0</b>	<b>Item</b>	<b>Non-Asbestos Dry Ropes</b>			
<b>2.0</b>	<b>Material Code(s)</b>				
		<b>Material Description</b>	<b>Material Code</b>		
2.1		Non-Asbestos dry rope Dia 6 mm	22 021 006 0000		
2.2		Non-Asbestos dry rope Dia 8 mm	22 021 008 0000		
2.3		Non-Asbestos dry rope Dia 10 mm	22 021 010 0000		
2.4		Non-Asbestos dry rope Square 3 mm	22 021 103 0000		
2.5		Non-Asbestos dry rope Square 6 mm	22 021 106 0000		
2.6		Non-Asbestos dry rope Square 8 mm	22 021 108 0000		
2.7		Non-Asbestos dry rope Square 10 mm	22 021 110 0000		
2.8		Non-Asbestos dry rope Square 12 mm	22 021 112 0000		
2.9		Non-Asbestos dry rope Square 20 mm	22 021 120 0000		
2.10		Non-Asbestos dry rope Square 40 mm	22 021 140 0000		
3.0	<b>Application</b>	Used in-between air & gas duct flanges as packing rope to arrest leakage in power plants.			
4.0	<b>Working Temperature</b>	250 Deg C.			
5.0	<b>Working Pressure</b>	20 Bar			
6.0	<b>Material</b>	PTFE or ARAMID			
7.0	<b>Dimensions:</b>				
	7.1	The required sizes for Non-Asbestos packing Ropes shall be SQ. 3,6,8,10,12,20 & 40 mm and Ø 6,8 & 10 mm.			
	7.2	The maximum permissible variations in size dimensions shall be ± 0.50 mm for sizes up to and including 10 mm and ± 1 mm for sizes above 10 mm.			
	7.3	The Non-Asbestos Packing Ropes shall be manufactured and supplied in coils of length of 25 m / 50 m.			
8.0	<b>General:</b>				
	8.1	Vendor to furnish the material, density, weight per meter, Maximum working temperature & pressure, compressibility , mechanical and other properties of the offered items.			
	8.2	Samples shall be supplied along with the offer.			
	8.3	The surface of the packing Ropes shall be smooth and it shall not have torn out threads.			
	8.4	Density variation shall not be more than + or - 10%.			
	8.5	The ropes shall be packed with polythene laminated HDPE bags with marking Density, Size, Thickness, quantity and weight.			
00	16-02-13	(Sd) GA	(Sd) KP	(Sd) PPS	FRESH ISSUE
<b>Rev.No</b>	<b>Date</b>	<b>Prepared</b>	<b>Checked</b>	<b>Approved</b>	<b>Record of Revisions.</b>



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1.0	Item	<b>Non-Asbestos Lubricated Ropes</b>			
2.0	Material Code(s)				
		<b>Material Description</b>	<b>Material Code</b>		
2.1		Non-Asbestos Lubricated rope Square 10 mm	22 022 110 0000		
2.2		Non-Asbestos Lubricated rope Square 12 mm	22 022 112 0000		
3.0	Application	Used as sealing between moving and static components surrounded by air / gas in power plants.			
4.0	Working Temperature	250 Deg C.			
5.0	Working Pressure	20 Bar			
6.0	Material	PTFE with In-Blend Graphite as Lubricant			
7.0	<b>Dimensions:</b>				
	7.1	The required sizes for Non-Asbestos packing Ropes shall be SQ. 10 & 12.			
	7.2	The maximum permissible variations in size dimensions shall be $\pm 0.50$ mm for sizes up to and including 10 mm and $\pm 1$ mm for sizes above 10 mm.			
	7.3	The Non-Asbestos Packing Ropes shall be manufactured and supplied in coils of length of 25 m / 50 m.			
8.0	<b>General:</b>				
	8.1	Vendor to furnish the density, weight per meter, Maximum working temperature & pressure, compressibility, mechanical and other properties of the offered items.			
	8.2	Samples shall be supplied along with the offer.			
	8.3	The surface of the packing Ropes shall be smooth and it shall not have Torn our threads.			
	8.4	Density variation shall not be more than + or - 10%.			
	8.5	The ropes shall be packed with polythene laminated HDPE bags with marking Density, Size, Thickness, quantity and weight.			
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<b>1.0</b>	<b>Item</b>	<b>Non-Asbestos High temperature Ropes</b>			
2.0	Material Code				
	<b>Material Description</b>	<b>Material Code</b>			
2.1	Non-Asbestos High temperature rope Dia. 6mm	22 024 006 0000			
2.2	Non-Asbestos High temperature rope Dia. 10mm	22 024 010 0000			
2.3	Non-Asbestos High temperature rope Square 12mm	22 024 112 0000			
2.4	Non-Asbestos High temperature rope Square 20mm	22 024 120 0000			
3.0	Application	Used in-between air & gas duct flanges as packing rope to arrest leakage and as sealing between moving & static components surrounded by air / gas in power plants.			
4.0	Working Temperature	400 Deg C.			
5.0	Working Pressure	20 Bar			
6.0	Material	Carbon / Graphite			
7.0	<b>Dimensions:</b>				
	7.1	The required sizes for Non-Asbestos packing Ropes shall be Dia.6,10 & Sq.20.			
	7.2	The maximum permissible variations in size dimensions shall be $\pm 0.50$ mm for sizes up to and including 10 mm and $\pm 1$ mm for sizes above 10 mm..			
	7.3	The Non-Asbestos Packing Ropes shall be manufactured and supplied in coils of length of 25 m / 50 m.			
8.0	<b>General:</b>				
	8.1	Vendor to furnish the material, density, weight per meter, Maximum working temperature & pressure, compressibility, mechanical and other properties of the offered items.			
	8.2	Samples shall be supplied along with the offer.			
	8.3	The surface of the packing Ropes shall be smooth and it shall not have Torn our threads.			
	8.4	Density variation shall not be more than + or - 10%.			
	8.5	The ropes shall be packed with polythene laminated HDPE bags with marking Density, Size, Thickness, quantity and weight.			
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1.0	Item	Non-Asbestos Graphite Sheets			
2.0	Material Code(s)				
		Material Description	Material Code		
2.1		Non-Asbestos Graphite sheet 1.5 mm thickness	22 023 001 0000		
2.2		Non-Asbestos Graphite sheet 2 mm thickness	22 023 002 0000		
2.3		Non-Asbestos Graphite sheet 3 mm thickness	22 023 003 0000		
2.4		Non-Asbestos Graphite sheet 5 mm thickness	22 023 005 0000		
2.5		Non-Asbestos Graphite sheet 5 mm thickness OD 435mm & ID 370mm.	22 023 005 0435		
3.0	Application	Used in-between air & gas duct flanges, water line and oil line flanges as gasket to arrest leakage in power plants.			
4.0	Working Temperature	400 Deg C.			
5.0	Working Pressure	20 Bar			
6.0	Material	Graphite			
7.0	<b>Dimensions:</b>				
	7.1	The required sizes for Non-Asbestos graphite sheets shall be 1.5, 2,3 & 5mm thickness.			
	7.2	The Non-Asbestos Graphite sheet shall be supplied in Rolls of nominal width 500mm and length of 10 to 25 meter unless otherwise specified.			
8.0	<b>General:</b>				
	8.1	Vendor to furnish the density, weight per square meter, Maximum working temperature & pressure, compressibility, mechanical and other properties of the offered items.			
	8.2	Samples shall be supplied along with the offer.			
	8.3	Density variation shall not be more than + or - 10%.			
	8.4	The sheets shall be packed with polythene laminated HDPE bags with marking Density, Size, Thickness, quantity and weight.			
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