

NTPC LTD
CC-OS
EOC NOIDA

**Sub: Qualifying requirement for Centralized Enlistment of Vendors for 46MEG-19
Endless Belt for RC Feeder.**

A)	MEG Details		
	1.0	MEG No.	46MEG-19
	2.0	MEG Description	Endless Belt for RC Feeder
	3.0	Responsibility centre	CC
B)	<p>Technical Criteria of QR:</p> <p>Option-1</p> <ol style="list-style-type: none"> 1. The applicant should be manufacturer of the Raw Coal Feeder. 2. The applicant should have supplied such Raw Coal Feeder to at least two power plants each of 200MW or higher capacity, located at two different power stations during last 5 years from the date of application. <p>Option-2</p> <ol style="list-style-type: none"> i. The applicant should be manufacturer of endless feeder belt and should have supplied endless feeder belt of size 36 inch or higher size during last 5 years from the date of application. ii. The applicant should have following manufacturing facilities in their own works: <ol style="list-style-type: none"> a. Calendar machine having three or more rollers b. Mechanized stretching facility for pre tensioning of fabric plies during belt manufacturing process. iii. The applicant's works should have following testing / measurement facilities: <ol style="list-style-type: none"> a. Adhesion testing machine b. Tensile testing machine c. An internal Quality Assurance wing <p>To be considered as qualified an applicant has to meet all the requirements of either of Option-1 or of Option-2.</p>		
C)	<p>Document to be submitted by the applicants against qualifying requirements:</p> <p>Option-1</p> <ol style="list-style-type: none"> i. QR- part (i): Catalogue / Brochure / Leaflet of Raw Coal Feeder being manufactured by the party any other relevant documents like ISO Certificate / Quality Plan. ii. QR Part (ii) – Any credential document like LOA / Purchase Order and execution proofs etc, LOA / PO Date should not be more than 5 years old on date of application submission. <p>Option-2</p> <ol style="list-style-type: none"> i. QR- part (i): Catalogue / Brochure / Leaflet of endless Feeder Belt being manufactured by the applicant or any other relevant documents in support of manufacturer of same belt + Purchase Order copy for endless feeder belt with proof of execution of same PO, PO date should not be more than five years old on the date of application submission. ii. QR Part (ii) – Self certification by the manufacturer regarding the availability of manufacturing facilities as sought in the QR along with details of make, model & specification and photo of the machines. iii. QR Part (iii) (a & b) – Self certification by the manufacturer regarding the 		

	<p>availability of testing facilities as sought in the QR along with details of make, model & specification and photo of the testing machines.</p> <p>iv. QR Part (iii) sub part (c) – Self certification regarding availability of QA Wing in the manufacturing works of the applicant along with name & qualifications of employees in the QA Wing.</p>
D)	<p>Other documents to be submitted:</p> <p>In addition to the documents required in support of meeting technical requirements as stated above, following documents are required to be submitted by the applicant for enlistment:</p> <ol style="list-style-type: none"> 1. Three POs of highest executed values of similar work during last five years from the date of application (PO date should not be more than 5 years old on the date of the application) along with copy of invoice / completion certificate from the concerned buyer/s in support of successful execution of supply against POs. 2. Audited balance sheet including profit and loss statement for the previous three completed financial years reckoned from the date of application. In case the audited results for the preceding financial year is not available, certification of financial statements from a practicing chartered account may be submitted. In case, Applicant is not able to submit the certificate from practicing chartered Account certifying its financial parameters, the audited results of three consecutive financial years preceding the last financial year shall be considered for evaluating the financial parameters. Further a Certificate would be required from the CEO/CFO as per the format enclosed in the application format documents stating that the financial results of the company are under audit as on the date of Application and the Certificate from the practicing Chartered Accountant certifying the financial parameters is not available. 3. Any other document in addition to the above which the applicant wants to submit.
Note-1	<p>Similar works means: Supply of endless belt for RC Feeder to Thermal Power Plants / Steel Plants / Cement Plants or RC Feeder manufacturers.</p>
Note-2	<p>The executed value means basic value of quantity of similar works executed / supplied against the reference PO (also applicable to partly executed POs as on the date of application). Where PO value is composite (i.e., including taxes etc.) the applicant to give item-wise break up of composite PO mentioning basic value, taxes etc.</p>

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Sub: Technical Specifications for Vendor Enlistment for supply of 46MEG-19 Endless Belt for RC Feeder

A)	MEG DETAILS		
	1.0	MEG NO.	46MEG-19
	2.0	MEG DESCRIPTION	Endless Belt for RC Feeder
	3.0	RESPONSIBILITY CENTRE	CC
B)	Technical Specifications: AS per attached Quality Plan and reference technical specification.		



ITEM: ENDLESS BELT FOR FEEDER/IRC FEEDER BELT

STANDARD QUALITY PLAN (CONFORMING TO CODE:1891, PART-I)

QP NO.: 0000-999-QOM-S-089
REV. NO: 0 DATE :04.11.2016
VALID UP TO:
PAGE 1 OF 3

APPROVED BY:

REVIEWED BY:

S.N.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORM	FORMAT OF RECORD		AGENCY			REMARKS
					M	C/N			M	C	N			
1.	2.	3.	4.	5.	6.		7.	8.	9.	D*	10.			11.

1.0 RAW MATERIAL INSPECTION

1.1	Raw textile fabric	Folding texture, threads, warp & weft	Major	Visual	Random 10%	--	Tech spec/ Mfr's std.	Tech spec/ Mfr's std.	Mfr's TC/IR	-	P	-	-	
1.2		Tensile strength, Warp & weft	-do-	Physical	-do-		-do-	-do-	-do-	√	P	V	V	
1.3		Elong at ref. load & breaking load, warp & weft	-do-	-do-	-do-		-do-	-do-	-do-	√	P	V	V	
1.4		Conditioned weight in gm/sqm, thickness/ply, roll width	-do-	-do-	-do-		-do-	-do-	-do-	√	P	V	V	
1.5		Weaving quality, twist /meter folded & singles, % of crimp, warp & weft	-do-	Visual, Physical	-do-		-do-	-do-	-do-	√	P	V	V	
1.6		Moisture regain (%), adhesion	-do-	Physical	-do-		-do-	-do-	-do-	√	P	V	V	

2.0 IN-PROCESS INSPECTION

2.1	Rubber coating of Fabrics	Ply length, width & thickness	Major	Measure	Each ply	-	Tech spec/ Mfr's std.	Tech spec/ Mfr's std.	IR	√	P	V	-	
2.2		Fabric Roll No & type	-do-	Visual	-do-		-do-	-do-	-do-	√	P	V	-	
2.3	Rubber cover sheeting	Length, width/thickness	-do-	Measure	Each Sheet		-do-	-do-	-do-	√	P	V	-	
2.4		Compound code & batch No.	-do-	Visual	-do-		-do-	-do-	-do-	√	P	V	-	
2.5	Belt building	Length, width & thick	-do-	Measure	-do-		-do-	-do-	-do-	√	P	V	-	
2.6		Cover & ply position	-do-	Visual	-do-		-do-	-do-	-do-	√	P	V	-	
2.7	Molding(Curing)	Curing Temp &, Time	-do-	Physical	-do-		-do-	-do-	-do-	√	P	V	-	
2.8		Hydraulic pressure	-do-	-do-	-do-		-do-	-do-	-do-	√	P	V	-	
2.9		Cured belt- length, width & thickness	-do-	Measure	-do-		-do-	-do-	-do-	√	P	V	-	
2.10	Dressing & sizing	Finish, Edge (Mould/cut)	-do-	Visual	-do-		-do-	-do-	-do-	√	P	V	-	
2.11	Inspection of cured belt	Mapping of surface defect, their type & repair	-do-	-do-	-do-		-do-	-do-	-do-	√	P	V	V	Repair list (if any) to be furnished by vendor

LEGEND: * RECORDS, IDENTIFIED WITH "TICK" (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION.
** M: MANUFACTURER/SUB-SUPPLIER C: MAIN SUPPLIER/PIA, N: NTPC P: PERFORM W: WITNESS AND V: VERIFICATION, AS APPROPRIATE. CHP: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W" DP- DUTY POINT, UT- ULTRASONIC TEST, IR- INSPECTION REPORT, MTC- MATERIAL TEST CERTIFICATE

NOTE:# NTPC INSPECTION ENGINEER TO CHECK APPROVAL DATE/ REVISION NO. OF REFERENCE DOCUMENTS AT THE TIME OF INSPECTION

FORMAT NO.: QS-01-QAI-P-10/F1-R1

ENGG. DIV./QA&I



ITEM: ENDLESS BELT FOR FEEDER/RC FEEDER BELT

STANDARD QUALITY PLAN (CONFORMING TO CODE:1891, PART-I)

QP NO.: 0000-999-QOM-S-089
REV. NO: 0 DATE :04.11.2016
VALID UP TO:
PAGE 2 OF 3

APPROVED BY:

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S.N.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORM	FORMAT OF RECORD	AGENCY				REMARKS	
					M	C/N				M	C	N			
1.	2.	3.	4.	5.	6.		7.	8.	9.	D*	10.				11.

FINAL INSPECTION

3.0																		
3.1	Rubber Cover Properties	Cover TS & Elong: a) Before ageing b) After ageing	Critical	Physical	1 belt /lot	1 belt /lot	IS-1891, P-I/ Tech Spec	IS-1891, P-I/ Tech Spec	IR	✓	P	W	W					
3.2		Abrasion loss	-do-	-do-	-do-	-do-	-do-	-do-	-do-	✓	P	W	W					
3.3		Tear strength	-do-	-do-	-do-	-do-	ASTM D624 Type C/ Tech Spec	Tech Spec	-do-	✓	P	W	W					
3.4	Full thickness belt property	Breaking strength (Warp & weft)	-do-	-do-	-do-	-do-	IS-1891, P-I/ Tech Spec	IS-1891, P-I/ Tech Spec	-do-	✓	P	W	W					
3.5		Elong. at ref. load & break load	-do-	-do-	-do-	-do-	-do-	-do-	-do-	✓	P	W	W					
3.6		Adhesion between ply & ply and cover & Ply	-do-	-do-	-do-	-do-	-do-	-do-	-do-	✓	P	W	W					
3.7	Finished Belt (Visual, dimension & shore hardness)	Visual Exam. For surface finish	-do-	Visual	Each belt	Each belt	-do-	-do-	-do-	✓	P	W	W					
3.8		Mapping of surface defect, their type & repair	-do-	Physical	-do-	-do-	-do-	-do-	-do-	✓	P	W	W					
3.9		Thick of full belt & No. of plies, Top & bottom cover thick	-do-	Measure	1 belt /lot	1 belt /lot	-do-	-do-	-do-	✓	P	W	W					
3.10		Dimensions	-do-	-do-	1 belt /lot	1 belt /lot	Approved Drg/ PO Spec	-do-	-do-	✓	P	W	W					
3.11		Shore hardness	-do-	-do-	Random spot on each belt	Random spot on each belt	-do-	-do-	-do-	✓	P	W	W					
3.12	Packing & Marking	Completeness	Major	Visual	100%	-	Mir's std	Mir's std	-do-	-	P	V	-					


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FORMAT NO.: QS-01-QAI-P-10/F1-R1

ENGG. DIV./QA&I

B. B. B.

		ITEM: ENDLESS BELT FOR FEEDER/RC FEEDER BELT		<h3 style="text-align: center;">STANDARD QUALITY PLAN</h3> <p style="text-align: center;">(CONFORMING TO CODE:1891, PART-I)</p>				QP NO.: 0000-999-QOM -S -089 REV. NO: 0 DATE :04.11.2016 VALID UP TO:		REVIEWED BY:		APPROVED BY:									
		PAGE 3 OF 3 ACCEPTANCE NORM						REFERENCE DOCUMENT		QUANTUM OF CHECK M C N		FORMAT OF RECORD 9. D*		AGENCY M C N		REMARKS					
S.N.		COMPONENT & OPERATIONS		CHARACTERISTICS		CLASS		TYPE OF CHECK		QUANTUM OF CHECK		REFERENCE DOCUMENT		8.		9.		10.		11.	
1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.	

Note-1: Patch Repair norms

- a) Patch repair: Localized rectification of surface blemishes/defects in cured belt by using rubber compound similar to the mother compound upto top carcasses may be done by vulcanization.
- b) Buffing/dough filling: Entrapment of foreign matters may be buffed suitably subject to maintaining the specified minimum cover thickness. In case of lower thickness, happened due to buffing, should be filled up by same compound and vulcanized.
- c) The repair size within 25x25 mm will not be considered as patch repair.
- d) Max number of repairs as per note 'a' shall be limited to 5 per 100 m of belt length (rounded up to higher unit).
- e) Total number of repairs as per note 'a' & 'b' shall not exceed 10 per 100 m belt length.
- f) The max size of repair shall be 1/5 W X 1/5 W, with one dimension 1/5 W max, where W is the width of belt.

Note- 2: One No. finished Belt shall be randomly selected from the offered lot of finished belts and all destructive A class checks shall be carried out on samples cut from this test piece. Destructive piece shall be discarded.

Note- 3: All relevant codes/standards/documents shall be latest and to be arranged by vendor during PDI.

Note- 4: All instruments/Tools should be duly calibrated and tests are to be conducted at vendor's cost during PDI.

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FORMAT NO.: QS-01-QAI-P-10/F1-R1

Be...

ENGG. DIV./QA&I

Annexture-1

1. FEEDER BELT FOR COAL FEEDER _____ AS PER DRG.NO. _____
2. DESCRIPTION: ENDLESS FLAT BELT (VULCANISED SPLICED) WITH INTEGRALLY MOULDED CURBS AT SIDES AND INTEGRALLY MOULDED 'V' GUIDE AT THE PULLEY SIDE AS SHOWN IN THE DRAWING NO : _____
3. APPLICATION: THE BELT HAS TO CONTINUOUSLY MOVE BETWEEN THE DRIVE AND DRIVEN PULLEYS OF RAW COAL FEEDER WHICH HANDLES CRUSHED COAL OF 30 MM SIZE MAX.
4. CONSTRUCTION: THE BELT SHALL CONSIST OF 2 OR 3 PLYS OF WOVEN FABRIC SUITABLY IMPREGNATED WITH RUBBER AND HAVING RUBBER COVERS, THE WHOLE BEING VULCANISED TOGETHER IN A UNIFORM MANNER.
5. MATERIAL: THE CARCASS MUST BE MADE OUT OF PLAIN NYLON - NYLON FABRIC SUITABLY IMPREGNATED WITH NATURAL RUBBER COMPOUND.THE TOP & BOTTOM COVERS ARE MADE OUT OF NATURAL RUBBER COMPOUND OF 3+ OR -0.2 MM & 2 +OR -0.2 MM THICK RESPECTIVELY. THE COVER GRADE SHALL BE M24 AS PER IS: 1891-PART 1/1994.
6. THICKNESS :9 MM TOL.+0.4 TO -0.4MM
7. WIDTH: 1168 + OR -4 MM.
8. BELT STRENGTH: MIN 400 KILO NEWTONS/METER WIDTH.
9. BELT JOINT STRENGTH: MIN 50% OF BELT STRENGTH.
10. ADHESION STRENGTH (BETWEEN PLYS): MIN 4. 5 KILO NEWTON / METER WIDTH.
11. ADHESION STRENGTH(COVER AND PLY) : MIN 3.5 KILO NEWTON/METER WIDTH
12. SURFACE HARDNESS IN RUBBER COVER SPECIMEN : 65 ± 5 SHORE 'A' (AS PER IS 3400 -PART 2)
13. ABRASION RESISTANCE: THE ABRASION LOSS MUST BE MAX 150 MM WHEN THE ABRASION TEST IS CONDUCTED AS PER IS: 3400 PART 3.
14. RUNNING SPEED : MAX 12 METER/MINUTE
15. DUTY CYCLE : CONTINUOUS
16. WORKING TEMPRATURE: 80 ° C.
17. MAX INSTANTANEOUS TEMPRATURE: 200 ° C.
18. SHELF LIFE REQUIRED : MIN 2 YEARS