

	<p>(UNDER JURISDICTION OF SINGRAULI COURT ONLY)  <b>NORTHERN COALFIELDS LIMITED</b>          (A Mini Ratna Company)  <b>(A Subsidiary of Coal India Limited/          A Government of India Undertaking)</b>          Materials Management Department          Regd. Office : PO: Singrauli Colliery,          Dist. Singrauli (M.P.) INDIA          Ph. No.07805-266606, Fax No.-266388,266640</p>	 
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**SUPPLY ORDER**

Ref.No:63616054 /115A1115

Dated: - 16/08/2016

<b>M/s Forech India Ltd.</b>	Fax no.033-24632234, Ph.No.033-24632234
<b>Merlin Links, 1<sup>st</sup> Floor, Flat No. 1 G &amp; F, 166B, S.P. Mukherjee Road,</b>	PCC: By Regd.Post
<b>Kolkata-700026</b>	VENDOR CODE:F 0028

**Sub: Our Global Tender No. NCL/ SGR/ MMD/ SKA/ 115A1115/ 95 dated 24.10.2015 Techno-Commercial Bid (Cover-I) opened on 14.12..2015 & Price Bid (Cover-II) opened on 29.06.2016 for supply of Steel Cord Conveyor Beltings.**

**Ref :** Your offer No. FIL/K/Q-ST/2015-16/226 dtd 20.11.15 and your subsequent letter No. FIL/K/Q-ST/2015-16/226/CLRN-002 dtd 26.07.16

Dear Sirs,

With reference to the above, we hereby place our formal Supply Order on you for supply of following materials. The supply shall be governed by the specifications, prices, terms & conditions mentioned hereunder and also unless otherwise specified as per General Terms & Conditions for supply of stores enclosed with NIT :-

**Scope of Supply**

Item Sl. No. of NIT	Description of Item	Quantity in (Mtrs)	Basic Unit Price ( Rs. Per mtr)	Extended Price (in Rupees )
	<b>“FORECH” make Steel Cord Conveyor Belting of following size conforming to relevant standard &amp; Grade “FR” as per ISO - 340 and in compliance to DGMS circular No.6 dated 06.09.2001</b>			
<b>1</b>	Width: 1200mm,Strength (ST):1600 KN, Cover Thickness:Top-8mm & Bottom-5 mm Material Code-93059990429	2300	5541.00	12744300.00
<b>2</b>	Width: 1400mm,Strength (ST):1400 KN, Cover Thickness:Top-8mm & Bottom-5 mm Material Code-93059990417	500	6550.00	3275000.00
<b>3</b>	Width: 1600mm,Strength (ST):1400 KN, Cover Thickness:Top-8mm & Bottom-5 mm Material Code-93059990405	3100	7120.00	22072000.00
<b>TOTAL BASIC VALUE</b>				38091300.00
<b>Detailed description &amp; technical specifications as per enclosed Annexure-I</b>				

**TOTAL BASIC VALUE:** Rs. 3,80,91,300.00 (Rupees Three Crore Eighty Lakh Ninety One Thousand Three Hundred only) excluding taxes and duties.

**TECHNICAL SPECIFICATIONS:** Enclosed at Annexure-I

**TERMS & CONDITIONS:**

- 1). **BASIS OF PRICE:** Prices are on FOR destination basis. The prices will remain firm till completion of supplies and safe arrival of materials up to destination will be your responsibility.
- 2). **EXCISE DUTY & EDUCATION CESS:** Excise Duty shall be paid extra at actuals against documentary evidence at the legally applicable rate at the time of supply, which is presently applicable @ 12.5%.

**For availing CENVAT Credit by NCL, you shall submit copy of CENVATABLE EXCISE Invoice as per rule 11 of CENTRAL EXCISE Rule 2002 at the time of supply of material along with the final bill(s) indicating therein Northern Coalfields Limited's ECC No, Range, Division and Commissionerate along with other details as detailed below:**

<b>Clean Energy Cess Regn. No./ Excise Regn.</b>	<b>Range</b>	<b>Division</b>	<b>Commissionerate</b>
<b>AABCN4884HEM011</b>	<b>Waidhan</b>	<b>Satna</b>	<b>Bhopal</b>

**You have to submit your auditor's certificate along with the bill confirming that refund/ credit if any obtained against Excise Duty has been/ shall be passed on to Northern Coalfields Ltd.**

- 3). **SALES TAX:** - Concessional Central Sales Tax will be payable extra at actuals as legally applicable at the time of supply which is presently applicable @ 2 % against Form 'C'. For availing concessional rate of Sales Tax, requisite Sales Tax declaration form will be furnished by the Consignee.
- 4). **PACKING & FORWARDING CHARGES:** Shall be borne by you.
- 5). **FREIGHT CHARGES:** Shall be borne by you.
- 6). **TRANSIT RISK INSURANCE:** Shall be arranged by you at your risk and cost for safe delivery of material to the consignee on door delivery basis.
- 7). **ENTRY TAX:** Payable extra to the State Govt. authority directly by the Consignee/Paying Authority. Present rate of entry tax is @1%.
- 8). **INSPECTION A) Pre-Despatch Inspection:** - Initial inspection shall be carried out at supplier's works by M/s CMPDIL, Ranchi including stage inspection and testing which inter-alia shall include the following as detailed below, at their works, as per the methodology before dispatch by deputing authorized representative:
  - 8.1 **Full thickness belt test:-**
    - a) Breaking load Kg/Sq. cm. for warp and weft.
    - b) Elongation under reference load (%).
    - c) Elongation at break (%)

**8.2 Rubber cover:-**

- a) Tensile strength of cover (Kg./sq. cm)
- b) Elongation at break (%)
- c) Adhesion between covers and steel re-enforcement/pull out strength.
- d) Abrasion loss of rubber cover.
- e) Fire resistance properties testing (Flame test)

**8.3 Physical dimension check****8.4 Flexibility test****8.5 Ageing test****8.6 Drum friction test****8.7 Surface, electrical resistance test.**

Inspection charges @1% plus service tax @15% will have to be initially paid by the seller, which will be reimbursed by NCL along with supply bill(s). In case materials are rejected or not ready for inspection on first inspection, all charges including Lodging, TA, inspection fee etc., for subsequent inspection shall be borne by the supplier. Seller will provide all facilities to carry out necessary 'Tests' as required. All technical specifications mentioned in the NIT should be ensured during the inspection procedure.

**Address of CMPDIL**

Chief General Manager (E&M), CMPDIL, Gondwana place,  
Kanke Road, Ranchi-834008 (Jharkhand State)  
Fax No.0651-2231851, 2231447  
Tel No.0651-2230238, 2231852, 2231850

**B) Post-Despatch Inspection:-**

- (i) Final Inspection will be carried out by the authorized representative of GM(E&M), NCL at consignee's end and the same shall be final.
- (ii) Samples of each lot of belting received at NCL shall be checked, after visual inspection, preferably at Government accredited laboratory, to ensure that the material supplied and issued conforms to specifications mentioned in the NIT.

**NOTE: If there be any increase in the rates of taxes and duties during the extended delivery period beyond the stipulated / scheduled delivery period, NCL shall not pay the increase in the Taxes & Duties and the increase will be to supplier's account and in case there is any decrease, the same shall be passed on to NCL.**

- 9). **SECURITY DEPOSIT:** You are advised to submit Security Deposit within 15 days for Rs. 4464953.00 (Rupees Forty Four Lakh Sixty Four Thousand Nine Hundred Fifty Three only) in the form of Bank Draft payable at Morwa Branch, Dist, Singrauli (M.P.) of any Nationalized/Scheduled Bank or in the form of Bank Guarantee executed by any Nationalized / Scheduled Bank as per Annexure K of NIT in favor of Northern Coalfields Limited. In case you fail to deposit the Security Money, the order shall be cancelled & the case shall be processed to order elsewhere & the firm's performance shall be kept recorded for future dealings with them. Security Money will be refunded within 30 days of satisfactory execution of the supply order. Security money may be converted into performance Bank Guarantee. Whenever Security money shall be treated as performance coverage of the supply order the operation of security Money BG/ Performance BG shall be guided by the stipulated Performance Bank Guarantee & Guarantee/ Warranty clause of this supply order.

- 10). DELIVERY PERIOD:** Within 6 (Six) months from the date of placement of Supply Order. However early delivery will be preferred. No materials should be supplied beyond the specified delivery period unless amendment for extension of delivery period is obtained from the MM Department of NCL.
- 11). CONSIGNEE:** The Depot Officer, Central Store, Jayant, Northern Coalfields Limited, PO: Jayant Colliery, Dist.- Singrauli ( M.P).
- 12). TERMS OF PAYMENTS:** 100% payment including all taxes and duties shall be made by the paying authority within 21 days from the date of receipt and acceptance of materials at Consignee's end or submission of Bills complete in all respect, whichever is later. The payment will be made by "Electronic Fund Transfer" (EFT) or e-payment after receipt and acceptance of Performance Bank Guarantee.
- 13). YOUR BANK A/C No.:** State Bank of India, Commercial Branch, Vardhman Trade Centre, Plt. No. 3 & 4, 2<sup>nd</sup> Floor, DDA Building, Nehru Place, New Delhi-19, A/C No.32271105393, IFSC Code/EFT No.-SBIN0004298 & MICR: 110002228.
- 14). PAYING AUTHORITY:** The Area Finance Manager (HQ), Northern Coalfields Limited, PO- Singrauli Colliery - 486 889, Dist. -Singrauli (M.P)
- 15). SUBMISSION OF BILLS:**
- A. Following documents may be submitted to the Consignee :
- i) Consignment Note.
  - ii) Delivery Challan in original.
  - iii) One copy of the Bill.
  - iv) Guaranty/ Warranty Certificate
  - v) Manufacturer's Test Certificate/ Test Cum Inspection certificate/ Price Fall Clause certificate
  - vi) Pre-despatch Inspection Certificate by CMPDIL
  - vii) All other documents specified in the Order.
- B. Following documents should be submitted to the Paying Authority :
- i) 100% bill in triplicate duly pre-receipted and stamped.
  - ii) Certificate for Price Fall Clause.
  - iii) Copy of the Consignment Note/Warranty /Guarantee Certificate/ Test cum inspection certificate.
  - iv) Pre-despatch Inspection Certificate by CMPDIL
  - v) All other documents specified in the Order.
- 16). PACKING:** The consignment should be securely packed & marked as per standard Trade Practices/BIS norms to withstand the rigors of transport to prevent any loss/damage or pilferage in transit and ensure safe arrival of goods at destination. Packing of all the materials shall conform to the requirements of the carriers.
- 17). MODE OF DESPATCH:** By road transport only on Door Delivery basis at your risk. Safe arrival of material at Consignee's end will be the responsibility of the supplier.
- 18). LOWEST PRICE CERTIFICATE:** You shall submit a certificate stating that the price charged by you against this contract is the lowest and is the same as applicable to other Government Departments/ Undertakings/ Other Organizations.

You should also certify that the prices charged are not higher than the prices charged for same /similar items to other Customers.

19). **RISK PURCHASE** : In the event of failure of supplier to deliver or dispatch the stores within the stipulated date/period of supply order, or in the event of breach of any of the terms and conditions mentioned in the supply order, Northern Coalfields Limited have the right to purchase the stores from elsewhere after due notice to the defaulting supplier at the risk and cost of the defaulting supplier. It is mentioned clearly that in the event of failure of supplier as detailed above, the cost of risk purchase exercise may be recovered from the bills against any other supplies pending at NCL and also in any other Subsidiary Company/Coal India Limited.

20). **LIQUIDATED DAMAGE:** In the event of failure to deliver the stores within the stipulated date/period in accordance with the specifications mentioned in the supply order and in the event of breach of any of the terms and conditions mentioned in the supply order, NCL should have the right:-

a) To recover from the successful tenderer as agreed liquidated damages a sum not less than 0.5% of the price of any store which the successful tenderer has not been able to supply as aforesaid for each week or part of a week during which the delivery of such stores may be in arrears limited to a ceiling of 10%. Where felt necessary, the limit of 10% can be increased to 15% at the sole discretion of GM (MM)/ NCL.

OR

b) To purchase from elsewhere after due notice to the successful tenderer on the account and at the risk of the defaulting supplier the stores not supplied or other of a similar description without cancelling the supply order in respect of consignment not yet due for supply.

OR

c) To cancel the supply order or a portion thereof and if so desired to purchase the stores at the risk and cost of the defaulting supplier and also-

d) To extend the period of delivery with or without penalty as may be considered fit and proper. The penalty if imposed shall not be more than the agreed liquidated damages referred to in clause (a) above.

e) To forfeit the security deposit fully or partly.

f) Whenever under this contract, a sum of money is recoverable from and payable by the supplier, NCL shall be entitled to recover such sum by appropriating in part or in whole by deducting any sum or which at any time thereafter may become due to the successful tenderer in this or any other contract. Should this sum be not sufficient to cover the full amount recoverable, the successful tenderer shall pay NCL on demand the remaining balance. The supplier shall not be entitled to any gain on any such purchase.

21). **PRICE FALL CLAUSE:** If, at any point of time during the period of execution of supply of this contract, you supply equipment /store of identical description in India to any customer including CIL, Subsidiary Companies at a price lower than the price stipulated in the first contract, you shall forthwith notify such reduction of sale price and NCL shall amend its contract price to the lower price. In event of non-intimation by you to this effect, suitable penal action may be considered against you.

The price fall clause shall apply when the period of execution of supply against contract of CIL/Subsidiary Companies (first contract) is concurrent with supply of another contract by you to other organisation including CIL/Subsidiary Companies (other contract), the lower price of the two will be applicable against the supplies made against the first contract, during the concurrent period of execution of supplies of the said two contracts.

**22). GUARANTEE/WARRANTY:** You shall give a warranty/guarantee for satisfactory performance of the supplied materials for a period of 36 months from the date of installation & commissioning or 42 months from the date of receipt and acceptance of materials at consignee's end, whichever is earlier. If the supplied item fails before achieving the guaranteed life, you shall have to replace the item free of cost. You shall be responsible for any defect that may develop under the conditions provided for by the contract and under proper use, arising from faulty materials, design or workmanship and shall remedy such defect at your own cost.

If it becomes necessary for you to replace or renew any defective portion of the goods, such replacement or renewal shall be made by you 100% free of cost without any extra cost to Northern Coalfields Limited. The new goods should be supplied on FOR destination basis free of cost.

Warranty replacement should be completed within a reasonable period maximum within one month from the date of claim free of cost up to ultimate consignee's end. All cases of warranty replacement will be decided on the basis of joint inspection of the failed goods held between the user's representative and supplier's representative.

**23). PERFORMANCE BANK GUARANTEE:** You will submit Performance Guarantee for Rs. 4464953.00 (Rupees Forty Four Lakh Sixty Four Thousand Nine Hundred Fifty Three only) to cover both satisfactory performance and guarantee/warranty. The Performance Bank Guarantee should be issued from Nationalised / Scheduled Bank strictly as per Annexure-L of NIT valid for 45 months from the date of receipt & acceptance of materials at consignee's end and the same shall be either released after expiry of its validity if no claim is pending or encashed or extended thereafter, as deemed fit. In case, Security Money has been submitted in the form of Bank Guarantee, the same may be converted in to performance bank guarantee (PBG) provided the validity is 45 months from the date of receipt and acceptance of materials at consignee's end. Whenever Security Money shall be treated as performance coverage of the contract, the operation of Security Money BG/Performance BG shall be guided by Clause No 6.5.1 (A),(B),(C) and (D) of CIL Purchase Manual with latest amendments.

**24). IDENTIFICATION MARK:-**

(a) The belting shall be marked on the carrying surface at both ends of each reel within first two mtrs. of its length and at intervals of maximum 12 Mtrs thereafter with the following details:-

- a) Manufacturer's name & trade mark if any, as well as NCL
- b) Rating of the belting
- c) Grade of rubber cover
- d) Last two digits of the year of manufacturing say 15 for 2015 & 16 for 2016
- e) Ref. of manufacturing standard

**25). JURISDICTION OF COURT:** All disputes are subject to jurisdiction of "Singrauli court" only.

**26). INTEGRITY PACT:** A copy of Integrity pact signed by your representatives and NCL's representatives is enclosed at Annexure-II.

This order will also be governed by the "General Terms & Conditions of supply of Stores" enclosed with our NIT and all the terms & conditions thereof and all provisions of CIL Purchase Manual unless otherwise specified in this order.

You are requested to kindly acknowledge receipt and acceptance of order within 10 (Ten) days from the date of issue of order. In case no reply is received, it will be presumed that the order has been accepted by you without any precondition

Yours faithfully,  
For and on behalf of Northern Coalfields Limited, Singrauli

(R K Raja)  
Asst. Manager (MM)

(S K Agrawal)  
Chief Manager (MM)

**Encl:**

1. Details of Technical Specification – Annexure-I
2. Integrity Pact duly signed -- Annexure-II

**Copy to :-**

The Chief Vigilance Officer, NCL, Singrauli.  
The Director Technical (Operation), NCL, Singrauli  
The General Manager(E&M), NCL, Singrauli  
The General Manager(Finance), NCL, Singrauli  
The Area Finance Manager(HQ), NCL, Singrauli  
The Depot Officer, Central Stores, NCL, Jayant  
The Progress Cell, NCL, MM Dept., Singrauli.  
The General Manager(MM), CCL/BCCL/ ECL/SECL/ WCL/ MCL.  
The Chief General Manager(E&M), CMPDI Limited, Gondwana Place,  
Kanke Road, Ranchi-834008.

Shri Sewa Ram, IAS (RTD), 660, Sector -26, Panchkula-134116 (Haryana).  
Mobile No. +91-9478730069. Email ID [sarangalsr@hotmail.com](mailto:sarangalsr@hotmail.com).

Shri J.K Khanna, IPS (Rtd), A-102, Sector-55, Noida-201307 (UP). Tel. No. 0120-4322330,  
Mobile No. +91-9810940403. Email ID [jkkhannaips@yahoo.com](mailto:jkkhannaips@yahoo.com).

This is issued against MB 2015-16 of Steel Cord Belting communicated by CM (Stores) vide no. NCL/SGR/Stores/MB/15-16/0067 dt.06/07.04.2015 & Registration No.115A1115 dated 24.10.15.

Budget of Rs. 4,46,49,526.74 (Rupees Four Crore Forty Six Lakh Forty Nine Thousand Five Hundred Twenty Six & Paise Seventy Four has been certified by GM(F) C&B from 'Centralized Spares others kept at HQ' vide No. NCL/HQ/C&B/Centralized/BC/Other Spares/2016-17/05/ dt 09.08.16

This supply Order is issued with the approval of FDs, NCL as communicated by C. Secy. vide No. NCL/Board/11(513)/335 dtd 03.08.16 & Finance Concurrence No.NCL/HQ/FC/2016-17/Other Spares/Centralized/04 dtd.09.08.2016.

(R K Raja)  
Asst. Manager (MM)

(S K Agrawal)  
Chief Manager (MM)

## ANNEXURE-I

### Technical details and Schedule of Requirement

Sl.No.	Mat. Code	Size of Steel cord Beltings with FR cover	Qty in Meter	Reel Length (Mtrs) xNo. of reel
1	93059990429	Steel Cord Belting 1200mm width, ST 1600 KN/M	2300	300 X 7 200 X 1
2	93059990417	Steel Cord Belting 1400 mm width, ST 1400 KN/M	500	300 X 1 200 X 1
3	93059990405	Steel Cord Belting 1600 mm width, ST 1400 KN/M	3100	300 X 10 100 X 1

### SPECIFICATION FOR STEEL CORD BELTING WITH FR COVER

#### 1.0 Basic parameters:-

#### 1.1 Carrying Material:-

- a) Coal/shale of maximum size 250 mm
- b) Percentage of shale/sand stone upto - 30%
- c) Percentage of moisture upto 20%
- d) Bulk density : 0.9-1.15 Te/Cum.
- e) Condition of material - wet & sticky.

#### 2.0 Duty conditions:

Beltings shall be designed for heavy duty condition and shall be suitable for 24 effective working hour operations per working day and 365 working days per year. This shall be suitable for installation over conveyor system having 35 degree troughing angle. It shall be suitable for operation at an ambient temperature from **4°C to 50° C**. It shall have sufficient resistance against exposure to open sun light so that its qualities do not deteriorate while working in open sun. It also may have to work in rain or in conditions where relative humidity goes upto 100%.

#### 3.0 Constructional features:

- 3.1 The rubber conveyor belting of steel cord shall be with skim coated, open end and edge protected construction.
- 3.2 The steel cords to be provided in the belt shall have characteristic of high tensile strength in longitudinal direction, high flexibility for increase fatigue resistance, less elasticity for minimum elongation and galvanizing for better adhesion of cords to rubber and toughness and protection against corrosion.
- 3.3 The steel cords shall be made of high quality carbon steel specially developed for use of belt with standard wires having the diameter of 0.2 to 0.5 mm & of strength 220 Kg/Sq. mm. The cords shall be coated with brass or zinc.



- 3.4** No cord joints shall be allowed in any reel of the belting. Cords will be equally pre-tensioned during manufacturing & curing of the belting. The difference between the tension of individual cord shall not exceed 200 N.
- 3.5** All the type test must be carried out before using the cords and the test certificate shall be submitted with the supply of the belting.
- 3.6** The belt shall have sufficient lateral flexibility so that it suits the 35 degree troughing angle requirements even when the belt is empty.
- 3.7** The belt shall have sufficient longitudinal flexibility so that it can easily flex around different pulleys of the conveyor.
- 3.8** The belt shall have sufficient impact resistance to withstand impact at the loading points.
- 4. Protections against Longitudinal cuts (RIP):-**  
To protect the belting against through cut/longitudinal cut, continuous Nylon cords of suitable design & strength in transverse direction shall be provided on top of longitudinal steel cords. The cross cords shall be of sufficient strength so as to protect the belt against any longitudinal cut. When a foreign material tries to longitudinally cut the belt, cross cords should offer sufficient resistance so as to protect the belt from ripping.
- 5. Belt cover:**  
The cover shall be made of natural/synthetic rubber as main material so that it is excellent in abrasion, impact and flexing and working suitable for surface operation. The rubber cover shall be extruded homogeneously in one sheet & should not be made of multiple sheets. It shall have sufficient thickness for protecting belt against damage and provide good protection. The tensile strength shall be in the region of 200 Kg/Sq. cm. The minimum tensile strength shall be 17 MPa. The grade of cover shall be fire resistant conforming to ISO 340. The abrasion loss of the cover, when tested as per DIN 53516 should be 175 cu. mm (Max.).
- 6.** The surface and edges of the finished belting shall be free from blisters, pattering and other surface defects and will be completely sealed against ingress of moisture. The belt shall be suitable for vulcanized joints.
- 7. Compliance with standards: -**  
The design, construction, testing and performance of the belting shall comply with all applicable codes and latest applicable Indian and / or equivalent International standards. The belting shall also conform to DGMS circular no.6 dated 06/09/01, the relevant portion of which is reproduced below:-
- (i) Fire resistant properties of the cover - to conform to IS:340.
  - (ii) Drum friction test - to conform to IS:1891 (Part-V) of 1993.
  - (iii) Max. surface electrical resistance - to conform to IS:1891 (Part-V) of 1993.
  - (iv) Cover abrasion loss (when tested as per DIN-53516):- 175 cu.mm.(Max.)
- 8. Inspection and quality control:-**  
Before dispatch, the finished material shall be subject to inspection at the works of manufacturer by the authorized representatives of NCL. All assistance & testing

facilities shall be made available to inspecting personnel by the manufacturer at their works. The manufacturer shall also make available to the purchaser's inspecting personnel all the relevant standards and codes of practice for manufacture, inspection and testing of the material. All relevant type test certificates shall have to be produced during inspection and alongwith supply. Inspection & testing shall inter-alia include the following:-

**8.1 Full thickness belt test:**

- a) Breaking load, Kg/Sq. Cm. for warp and weft.
- b) Elongation under reference load (%).
- c) Elongation at break (%)

**8.2 Rubber cover:**

- a) Tensile strength of cover (Kg/Sq.Cm)
- b) Elongation at break (%).
- c) Adhesion between covers and steel reinforcement/pull out strength.
- d) Abrasion loss of rubber cover.
- e) Fire resistance properties testing (Flame test).

**8.3 Physical dimension check**

**8.4 Flexibility test:**

**8.5 Ageing test**

**8.6 Drum friction test**

**8.7 Surface electrical resistance test.**

**9.0 Tolerance in Length:** The tolerance in length of only (+)2% / (-)0.5% maximum of ordered quantity will be allowed as per IS specification IS:1891 (Part-I) 1994 with latest amendment.

**10.0 Specification:**

10.1	Type of carcass	Steel cord	Steel cord	Steel cord
10.2	Duty condition	Heavy duty	Heavy duty	Heavy duty
10.3	Belt width in mm	1200	1400	1600
10.4	Tensile strength	ST 1600	ST 1400	ST 1400
10.5	Protection against (RIP) Longitudinal cut	As per clause 4.0	As per clause 4.0	As per clause 4.0
10.6	Cord construction	7x7	7x7	7x7
10.7	Cord dia	4.5 mm	4.5 mm	4.5 mm
10.8	No. of strand in each cord	49	49	49
10.9	Cord pitch	11.5 mm	14 mm	14 mm
10.10	No. of cords	97	98	112
10.11	Grade of rubber cover	Fire resistant		
10.12	Abrasion loss of rubber cover	175mm <sup>3</sup> max		
10.13	Top cover	8 mm		
10.14	Bottom cover	5 mm		

10.15	Adhesion strength/Pull out strength	As per applicable IS/International standard		
10.16	Troughability at 35° angle	As per applicable IS/International standard		
10.17	Elongation (%) at break (% of belt length)	0.35% at belt length (maximum)		
10.18	Elongation (%) of rubber cover at break	As per applicable IS/International standard		
10.19	Fire resistant properties of cover	Conforming to ISO 340		
10.20	Surface electrical resistance (Max)	Conforming to IS 1891 (Part V), 1993		
10.21	Drum friction test	Conforming to IS 1891 (Part V), 1993 i.e. the belt shall show no sign of flame, spark or glow. The drum temperature shall not exceed 325 degree Celsius within the 3 hrs. test period for each test as per IS 1891 (part V), 1993.		
10.22	Reel length (Meter) x No. of reels	300 x 7, 200 x 1	300 x 1, 200 x 1	300 x 10, 100 x 1

**11.0 Marking:** The belting shall be marked on the carrying surface at both ends of each reel within first two mtrs. of its length and at intervals of maximum 12 Mtrs. thereafter with the following details :-

- a) Manufacturer's name & trade mark if any, as well as NCL.
- b) Rating of the belting.
- c) Grade of rubber cover.
- d) Last two digits of the year of manufacturing say 15 for 2015 & 16 for 2016.
- e) Ref. of manufacturing standard.

(R K Raja)  
Asst. Manager (MM)

(S K Agrawal)  
Chief Manager (MM)