

CHAPTER III

TECHNICAL SPECIFICATIONS & CONDITIONS

1.0. Scope Of Supply:

long pipe conveyor belt with splicing materials enough for 16 joints.

Description:

1600 EP 1250/5/6+3 Pipe Conveyor

Qty Required:

Roll Length = 385 mtr.

No. of Rolls = 16 Rolls

Belt total length = 6160 mtrs.

Splicing Materials:

- * The splicing materials required should be specified by the Bidder in details (Items, Qty's and all data).
- * The recommended splicing materials should be enough for (16) Joints.

2.0. Pipe Conveyor:

2.1. Technical Data:

| | |
|-------------------------|--|
| BELT QUALITY | 1600 EP 1250 / 5PLY/6+3 Normal quality |
| PIPE DIAMETER | 400 MM |
| HANDLING RATE | 1250 t/h - 893 m ³ /h |
| CONVEYED MATERIAL | PHOSPHATE |
| MATERIAL DENSITY | 1400 Kg/m ³ |
| GRAIN SIZE | 0 - 6mm |
| MOISTURE CONTENT | 2% |
| LOADING RATIO | 68.10% |
| BELT SPEED | 2.9m/s |
| LIFTING HEIGHT | 9.66 m |
| MAX. INCLINATION | 5.2 Deg. |
| AXIAL DISTANCE | 2812 m |
| INSTALLED POWER | 2X250KW HEAD + 2X250KW TAIL |
| MAX. BELT TENSION | 257 KN |
| DRIVE PULLEY DIA | 1000mm |
| NO. OF DRIVES | 2 DRIVE |
| DRIVE PULLEY W/RUBBER | YES |
| ANGLE OF WRAP | 190 Deg. |
| COEFF. OF FRICTION | 0.35 |
| TAKE - UP PULLEY DIA | 800 mm |
| NO. OF TAKE UP PULLEY | 2 |
| TYPE OF TAKE UP | ELECTRICAL WINCHES |
| TAIL PULLEY DIA. | 1000 mm |
| NO. OF TAIL PULLEY | 2 |
| IDLERS SPACING CARRYING | 2.4 m |
| IDLERS SPACING RETURN | 2.4 m |
| NO. OF IDLERS | 13960 |

2.2. Ambient Conditions:

Temp. Max. 45C° Min. -45C°
Humidity Max. 57% Min 29%

2.3. Attached drawing show the cross section of the pipe and the transition points.

3.0. Technical Requirements:

The following data should be provided for the belt offered.
All tests to be carried out according to DIN or ISO standards.
All values should be guaranteed.

3.1. General:

| Characteristic | Unit | Value |
|--------------------------------|----------|-----------------|
| Belt total thickness | mm | approx. 17mm |
| Belt weight | Kg/m | to be specified |
| Fabric weight | Kg/m/ply | to be specified |
| Type of cover rubber | | to be specified |
| Belt molded edge | | Max.(15mm) |
| Minimum recommended pulley dia | mm | 800 mm |
| Belt tensile strength | N/mm | to be specified |

3.2. Cover Rubber:

| Characteristic | Unit | Value |
|--|--------------------|-----------------------------|
| Tear resistance Mpa | Mpa | to be specified |
| Tensile strength (DIN.53504) | Kg/cm ² | 160min.(DIN53504) |
| Elongation at break top cover | % | 400min.(DIN53504) |
| Elongation at break bottom cover | % | 450min.(DIN53504) |
| Cover Abrasion for ambient belts (max) | mm ³ | 100 (DIN.53516) |
| Hardness (DIN.53504) shore A | | 65+ 5 |
| Density of cover rubber | gr/cm ³ | to be specified |
| Max. decrease in tensile strength of cover rubber aged for 7 days at 70 deg. c for | % | to be specified (DIN.53528) |

3.3. Elongation:

| | | |
|--|---|-----------------------------|
| Elongation at working tension | % | 1.5 max. |
| Elongation at break in wrap | % | 16+4 |
| Elongation at break in weft | % | 24 |
| Max. decrease in elongation of cover rubber aged for 7 days at 70 deg.C for ambient temp. belts. | % | to be specified (DIN.53508) |

3.4. Specific Separation Strength (Adhesion):

| | | |
|------------------------------|-------|-------------------|
| Adhesion of cover to fabric | Kg/cm | 3.5min.(DIN22102) |
| Adhesion of fabric to fabric | Kg/cm | 4 min. (DIN22102) |

3.5. Fabric:

Polyester (E) should be in wrap direction

Polyamide (P) should be in weft direction

3.6. Splicing:

Splicing should be specified and following data should be stated.

- Detail of required materials
- Vulcanizing pressure & temp
- Vulcanizing duration
- Step length

3.7. Tolerances:

Belt thickness ± 1 mm

Belt width ± 5 mm

Roll length + 1% more than the required length.

4. Packing:

Belts should be wound on a steel or wooden reel and secured by steel bends, the flanges of reels should be bigger than the diameter of the spool and tempered in which case the wooden boards are nailed to the flanges. And the reels should be circular opening of 250-300 mm.

5. Warranty & Guarantee:

5.1 The supplier shall warrant that the belts supplied are free from faults in design, workmanship and materials, and of sufficient load capacity and of proper materials to fulfill satisfactorily the working requirements, new and are of the latest technology.

5.2 Should any defect in design, materials, workmanship or operating characteristics develop during the first year of operation but not later than 24 months from received the pipe conveyor and acceptance, the supplier agrees to make all necessary or desirable alternations, repairs and replacement of defective belts free of charge, and shall pay all expenses that may need to cover up the above subject, such as transportation from and to the site, delivery of defective belts to the site without any delay.

5.3 The guarantee shall be in the form of Bank guarantee equal to 10% of the pipe conveyor value, valid for Two Years starting from the date of taking over certificate.