

QUALITY ASSURANCE PLAN FOR P.O.

RUBBER LINER

SL NO.	COMPOENTS/ OPERATION	CHARECTERISTICS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	FORMATE OF RECORD	AGENCY	REMARK
1	WEAR RESISTANT RUBBER RAW MATERIALS	WEAR RESISTANT RUBBER	CHEMICAL COMPOSITION, HARDNESS	100%	P.O. No. <u>EM/MM/P/I OHP/21/201 6/2071, Dtd. 12.02.2018</u>	MTC FROM GOVT. APPROVED LABORATORY	GOVT. APPROVED LAB.	
2	IN PROCESS INSPECTION	MILXING, MILLING, CUTTING FOR REQUIRE SIZES	DIMENSION, HARDNESS, ELONGATION, TENSILE	100%	P.O. No. <u>EM/MM/P/I OHP/21/201 6/2071, Dtd. 12.02.2018</u>	TEST CERTIFICATE	SELF & Govt. Approved Lab.	
3	FINAL INSPECTION	FINISH GOODS	DIMENSION CHECKING, HARDNESS, FINISHING, TENSILE, ELONGATION	100%	P.O. NO. <u>EM/MM/P/I OHP/21/201 6/2071, Dtd. 12.02.2018</u>	MTC, GC, GOVT. CERTIFICATE	GOVT. APPROVED LAB. & SELF	6/13/18

⊕ All Mechanical testing such as Tensile and elongation tests to be done

at in process stage and reviewed by ^{2nd Party} Executive Engineer.

⊕ During final inspection only dimensional and hardness checks to be done along with review of mechanical & chemical testing reports.

Approved Subject to: (i) incorporation of changes made in the QAP.

27/11/19

(ii) the inspection & acceptance condition mentioned in the P.O.

Executive Engineer
Iron Ore Handling Plant
Paradeep Port Trust
6/2/18



1/18

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PARADIP PORT TRUST

Specification of Rubber Liners :

Wear Resistant rubber liners for use in Iron Ore Handling Plant to be used as liners in transfer chutes and bins. The rubber liners will be used to take direct impact in transfer chute and bins. The liners should be able to withstand a flow of 2500 TPH of lumpy Iron Ore of maximum 200mm size or fines with density 2.45 MT/Cum. The height of fall varies from 1 m to 15 m in some cases. The liners should at least satisfy the following specifications and of non-sticky in nature. In case of variation of specification, the same may be indicated for our acceptance.

SHORE HARDNESS SHOULD BE 68+ 50 SHORE AS PER ASTM D 14 15 .
Tensile strength 200-250 Kg/CM² as per ASTM 4 12. (DIE-C) IS 3400.

Elongation at breaking 450-500% as per ASTM D 4 12.
Abrasion Loss 0.2 gni/100 Resolution as per DIN 53516.

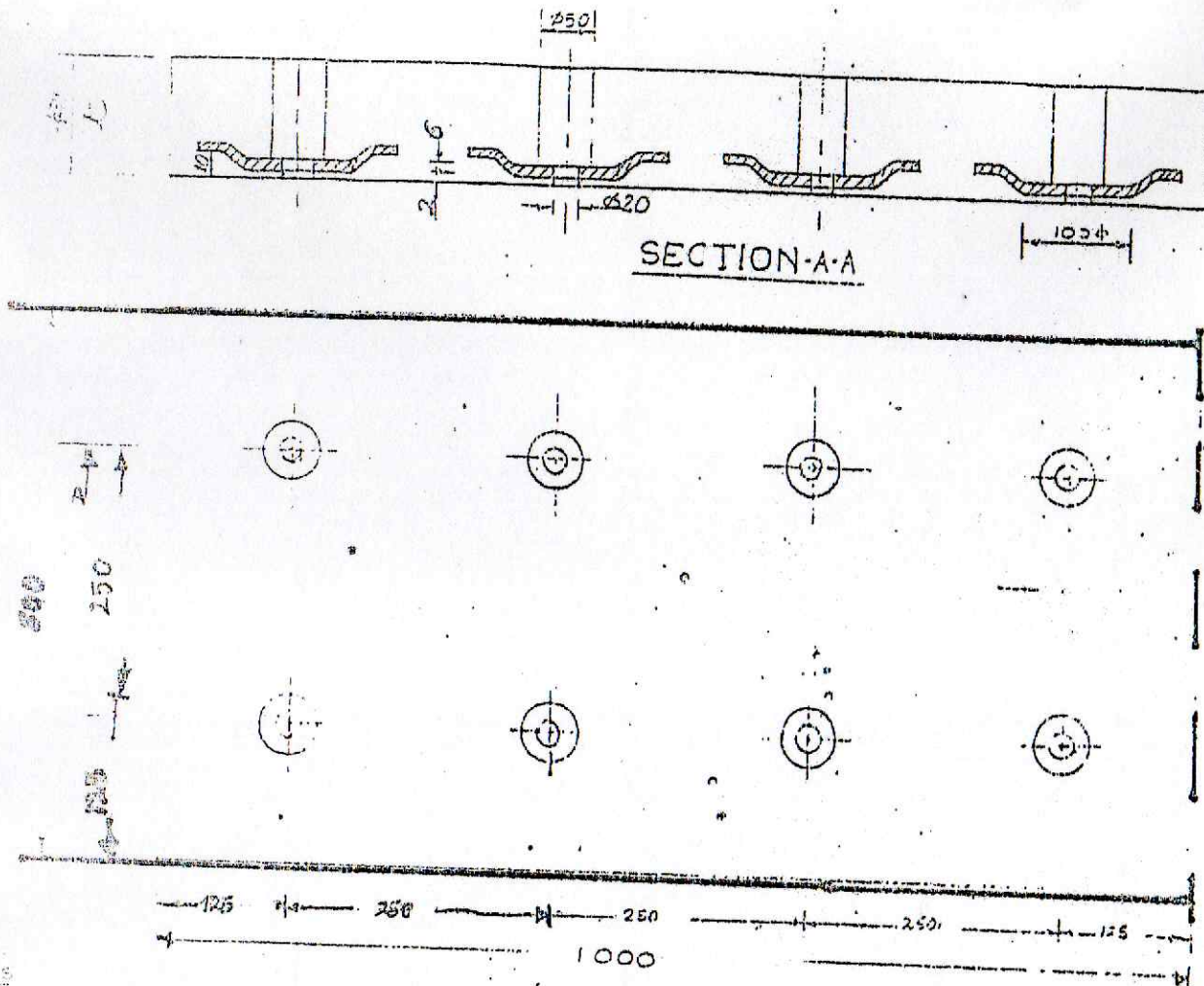
The liner shall be of standard size of 1000mm x 500mm with standard fixing holes of dia 28mm. Each liner shall have 8 nos. of bolt fixing holes, in 2 rows of 4 nos. each, equally spaced. The first hole is to be at 125 mm from the each and other 250mm apart. The bolt holes shall be suitably counter-sunk and re-inforced with steel washers properly fixed in the liners. Each liner shall b supplied with full set of 16mm dia x 60 mm long H.T. bolt of 8.8 grade, full thread with nylocnuts and washers. Plugs to close the countersunk holes also shall be provided.

All the liners compound should be checked on Rheometer. The rubber liners should guaranteed for 500 Hours operation and free replacement should be made in case of pre-mature failure.

Manager (Materials)
Paradip Port Trust
PARADIP
2013

RUBBER LINER

ITEM-4,5,6



→ 5mm thick, 120mm OD
 M.S backing plate
 at each hole
 plate
 → Rubber

T = Thickness of rubber liner

NOTES

- 1) All dimensions are in mm.
- 2) Tolerance on hole centre to centre = ± 2
- 3) Tolerance on hole centre to edge = ± 2
- 4) Tolerance on length, width and thickness = $\begin{matrix} +5.0 \\ -2.5 \end{matrix}$

Supply to be made with M 16x50 HT 8.8 grade full thread bolt and nut, washers and rubber plugs for each hole.

S. S. Srinivasan
 28/07/17

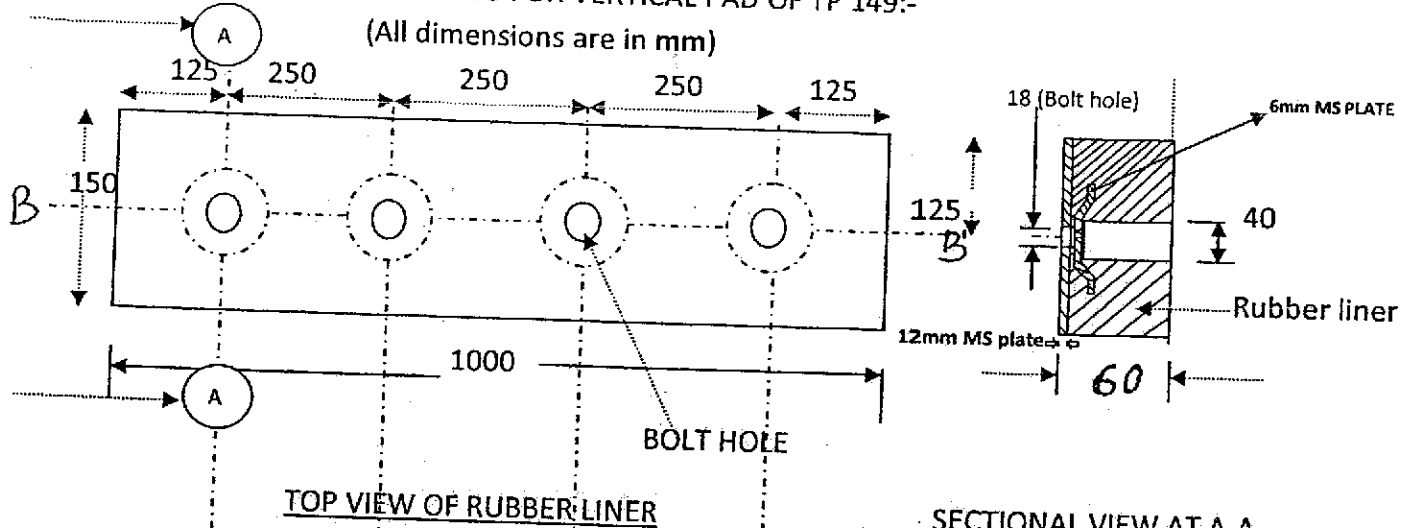
Executive Engineer,
 Iron Ore Handling Plant
 Paradip Port Trust

PARADIP PORT TRUST
 RUBBER LINER
 NOT TO SCALE
 IOHP-DIVN, DRG NO-46/2004

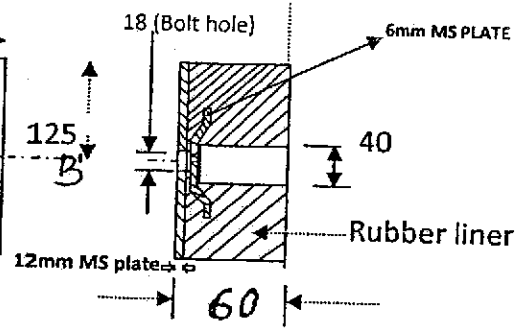
RUBBER LINER FOR VERTICAL PAD OF TP 149

1. RUBBER LINER DRAWING FOR VERTICAL PAD OF TP 149:-

(All dimensions are in mm)

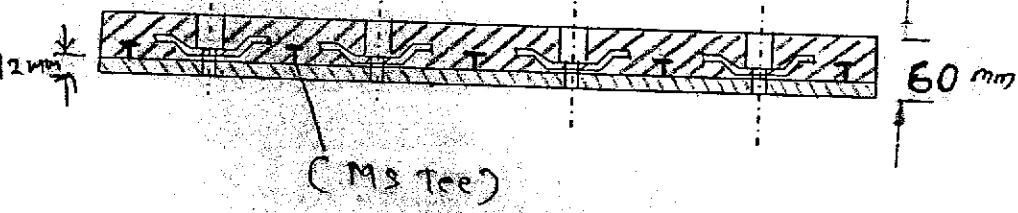


TOP VIEW OF RUBBER LINER



SECTIONAL VIEW AT A-A
(AT ALL BOLT HOLE)

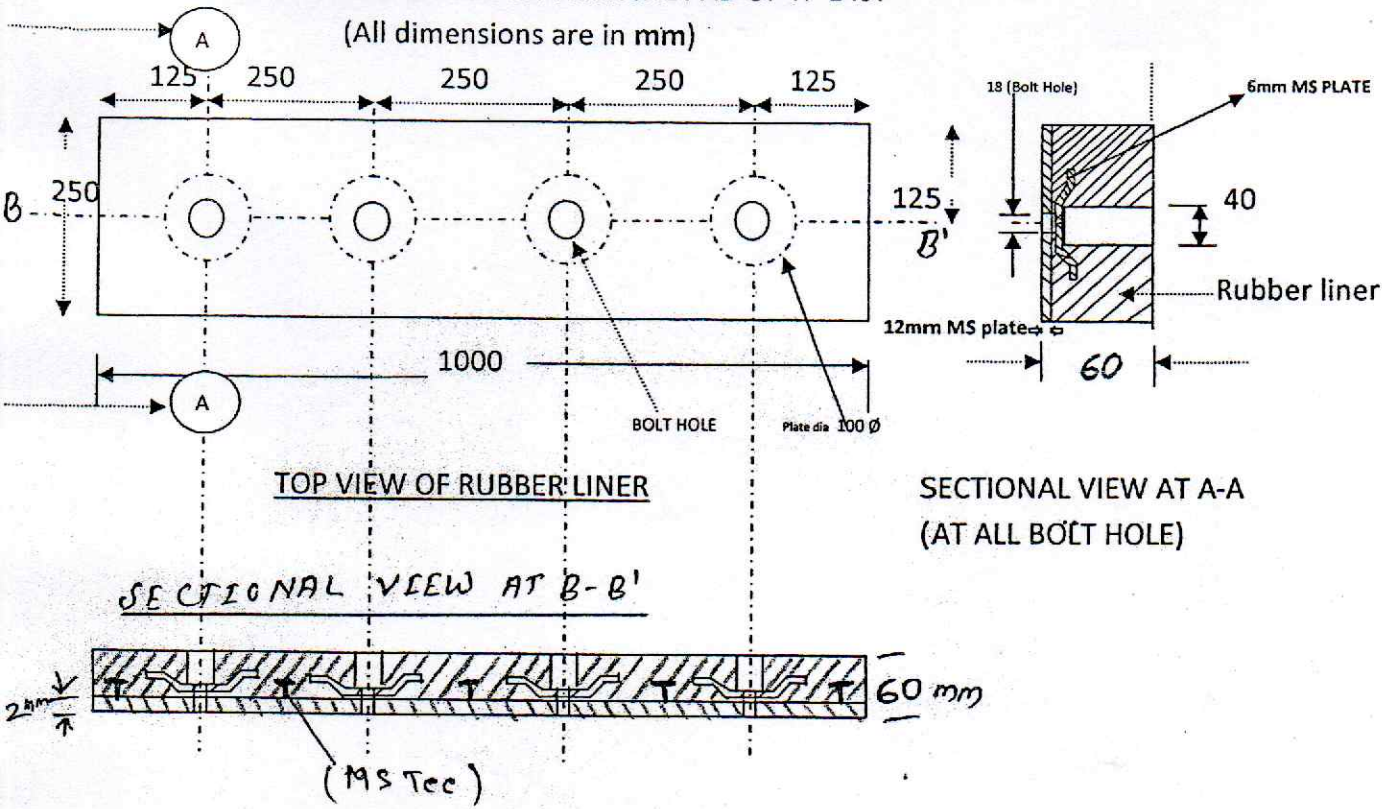
SECTIONAL VIEW AT B-B'



[Signature]
23/5/22

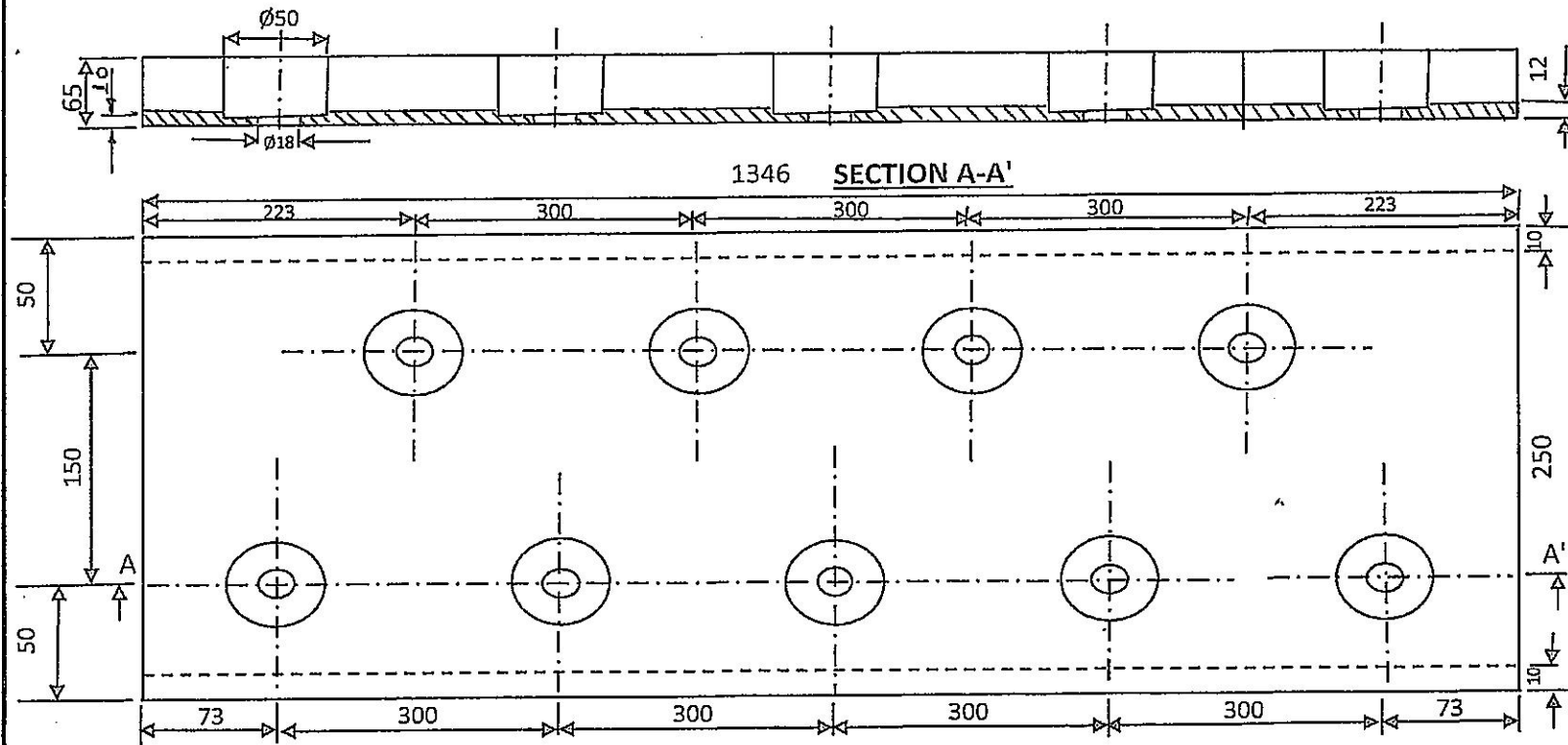
RUBBER LINER FOR VERTICAL PAD OF TP 149

1. RUBBER LINER DRAWING FOR VERTICAL PAD OF TP 149:-



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23/5/22

ITEM-08



12mm thick
 6mm thick, 90mm MS backing plate
 -Rubber

Notes:- (i) All dimensions are in mm.

- (ii) Tolerance on hole centre to centre = ± 2 mm
- (iii) Tolerance on hole centre to edge = ± 2 mm
- (iv) Overall tolerance on length, width & thickness = + 5mm /-2.5mm
- (v) Shore hardness of rubber 80+

N.B - Supply to be made with M16 X 40mm HT 10.9 grade full thread bolt, nut, washer & rubber plugs for each hole.

B. B. B.
 12.08.24
 Executive Engineer
 Iron Ore Handling Plant
 Paradip Port Authority

[Signature]
 12.8.24
 Asst. Executive Engineer
 I.O.H.P. Division
 Paradip Port Authority

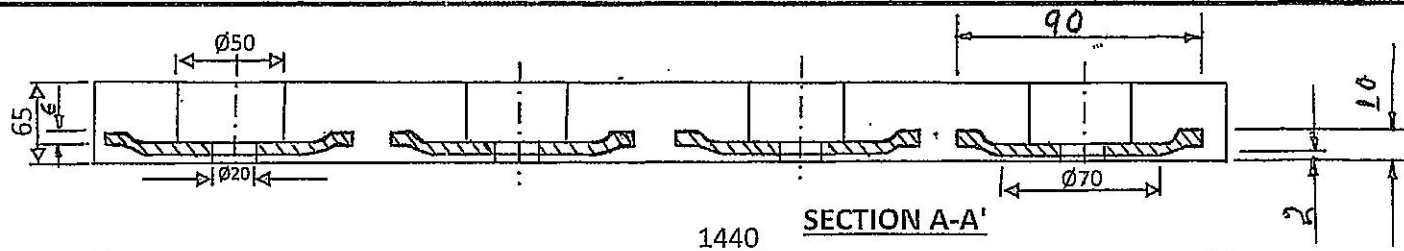
PARADIP PORT AUTHORITY


E & M Department, IOHP Division


RUBBER LINER SIZE-1346x250x65mm

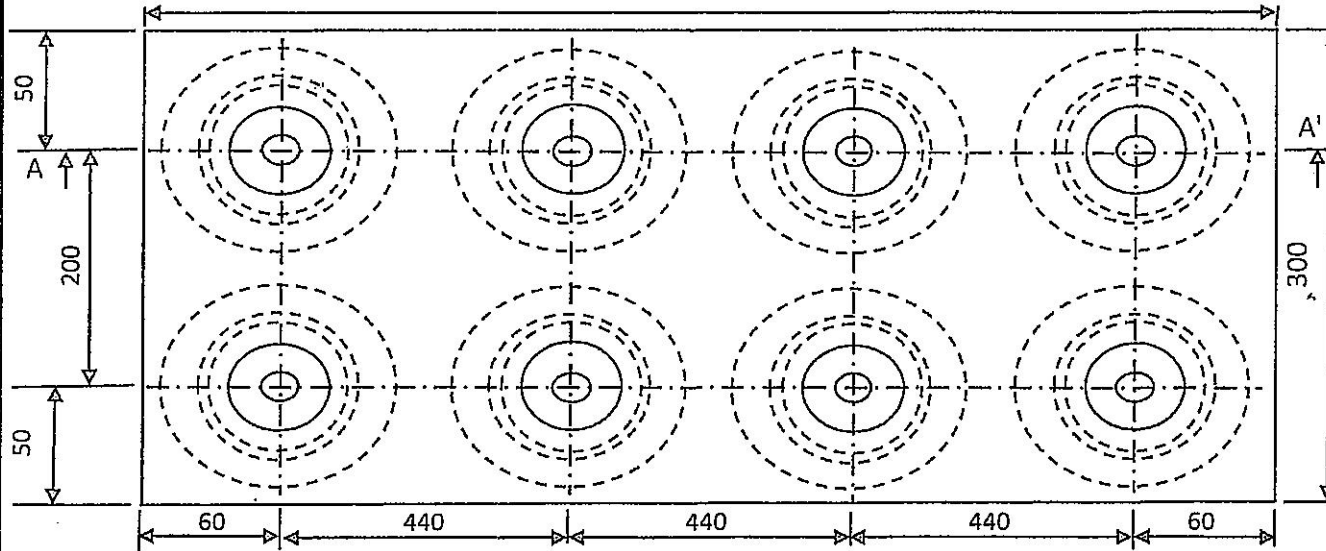
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ITEM-07



 - 6mm thick, 90mm MS backing plate

 - Rubber



Notes:- (i) All dimensions are in mm.

(ii) Tolerance on hole centre to centre = ± 2 mm

(iii) Tolerance on hole centre to edge = ± 2 mm

(iv) Overall tolerance on length, width & thickness = + 5mm /-2.5mm

(v) Shore hardness of rubber 80+

N.B - Supply to be made with M16 X 50mm HT 10.9 grade full thread bolt, nut, washer & rubber plugs for each hole.

B. B. B.
12.08.24

Executive Engineer
Iron Ore Handling Plant
Paradip Port Authority

D. B.
12.8.24

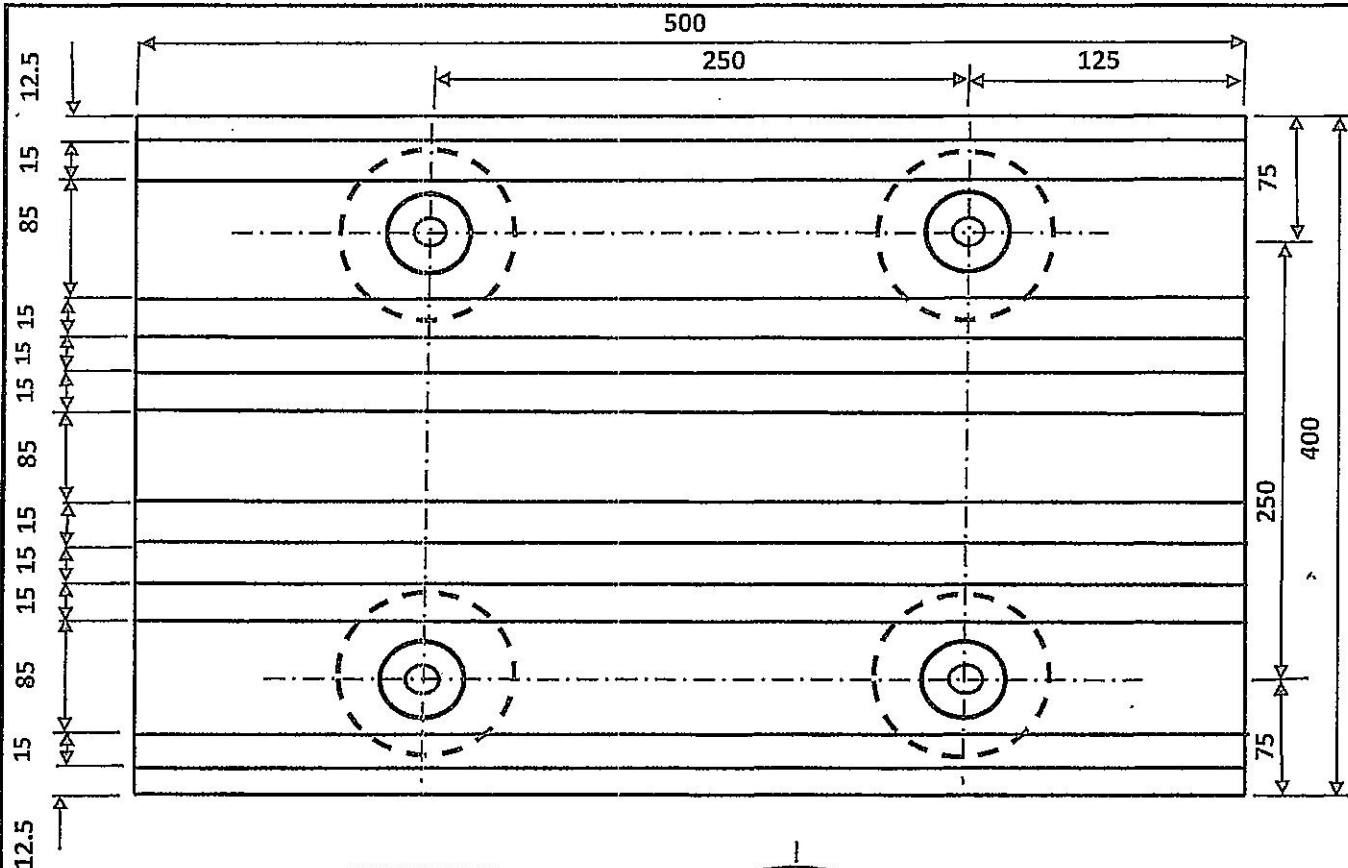
Asst. Executive Engineer
IOHP Division
Paradip Port Authority

PARADIP PORT AUTHORITY

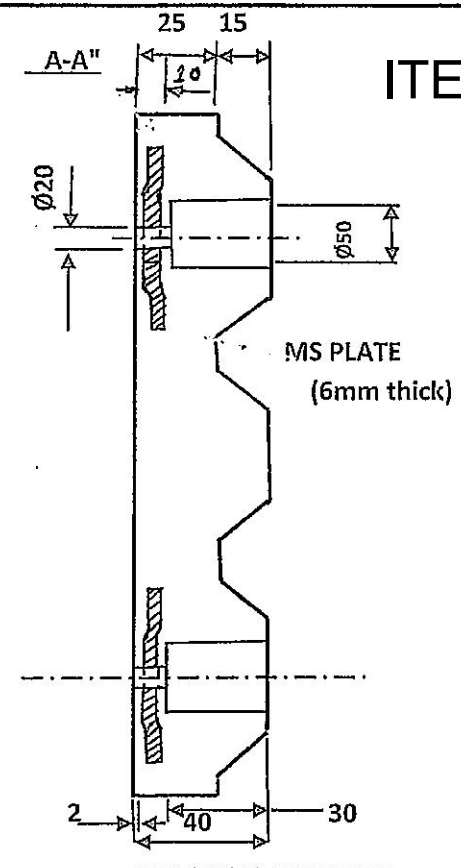
E & M Department, IOHP Division

RUBBER LINER SIZE-1440x300x65mm

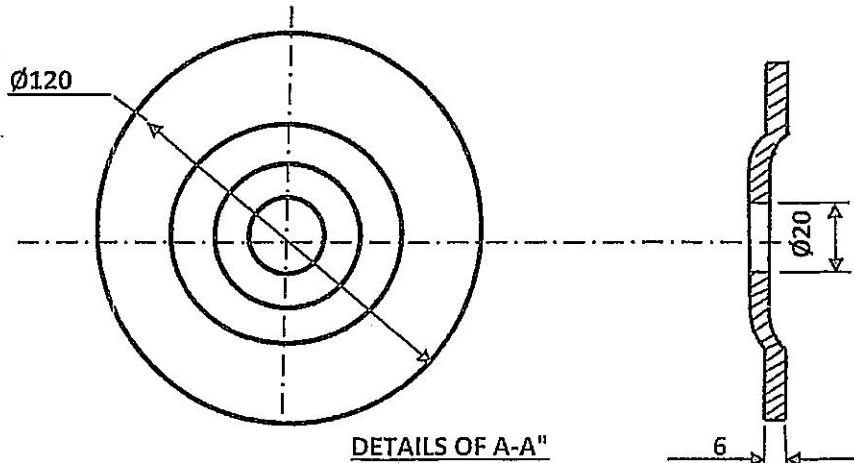
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FRONT VIEW



SECTIONAL SIDE VIEW



DETAILS OF A-A''

- 6mm thick, Ø100mm MS backing plate
- Rubber

ITEM-03

1. All the dimensions are in mm.
2. Tolerance on hole centre to centre = ± 2 mm
3. Tolerance on hole centre to edge = ± 2 mm
4. Overall tolerance on Length/Width and thickness = $\pm 5/-2.5$ mm
5. Shore hardness of rubber 80+

Notes- To be supplied with M16x50mm HT 10.9 grade full thread bolt, nut, washer and rubber plugs for each hole.

B. U. S.
 Executive Engineer
 Iron Ore Handling Plant
 Paradip Port Authority
 12.08.24

P. S.
 12.8.24

PARADIP PORT AUTHORITY
 E & M Department, IOHP Division

RUBBER LINER SIZE-500x400x40mm

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