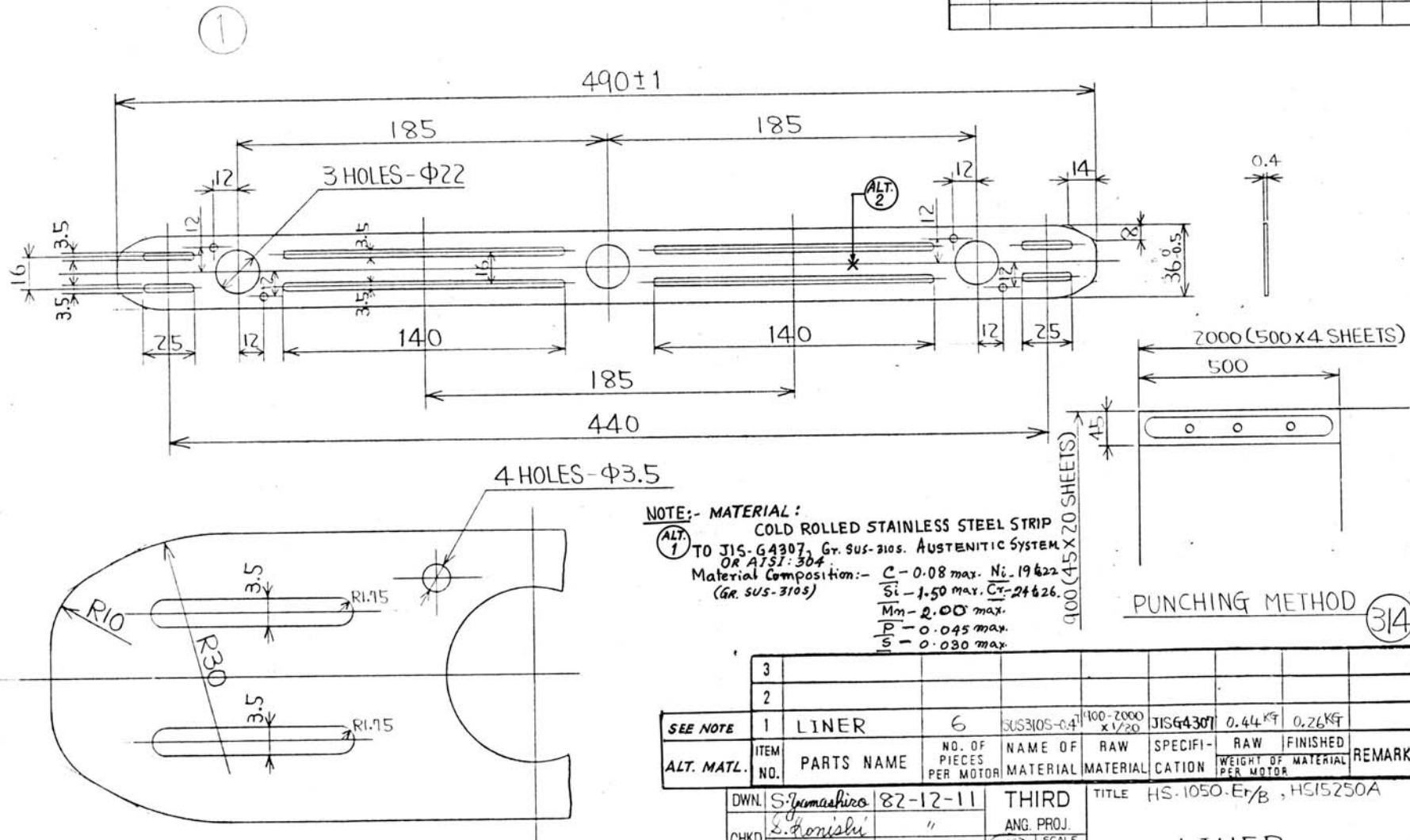


346152/2024/HEP-TXM20500

NOTE: THE IDENTIFICATION MARK OF EACH FIRM HAS TO BE CUT PUNCH WITH THE HELP OF DIE ITSELF AT THE PLACE LOCATED IN THE DRAWING.

SYM.	REVISIONS	DATE	REVD.	CHKD.	RE. DWG.	MTR.	RE. MF.
ALT. 1	ALTERNATE MATERIAL ADDED ON NOTE.	8-2-93					
2	NOTE-2 ADDED VIDE NOTE NO. EL/ITM/RO/13, DI-24-2-98	26-2-98					



NOTE:- MATERIAL :
COLD ROLLED STAINLESS STEEL STRIP
TO JIS-G4307, Gr. SUS-310S. AUSTENITIC SYSTEM
OR AISI-304
Material Composition:- C-0.08 max, Ni-19.622
(Gr. SUS-310S) Si-1.50 max, Cr-24.626
Mn-2.00 max.
P-0.045 max.
S-0.030 max.

3									
2									
SEE NOTE	1	LINER	6	SUS310S-0.4	100-2000 x 1/20	JISG4307	0.44 kg	0.26 kg	
ALT. MATL.	ITEM NO.	PARTS NAME	NO. OF PIECES PER MOTOR	NAME OF MATERIAL	RAW MATERIAL	SPECIFICATION	RAW WEIGHT OF MATERIAL PER MOTOR	FINISHED WEIGHT OF MATERIAL PER MOTOR	REMARKS

DWN.	S. Yamashiro	82-12-11	THIRD
CHKD.	S. Honishi	"	ANG. PROJ.
APPD.	S. Ito	"	SCALE 1/2

TITLE HS-1050-E/B, HS15250A

LINER

Hitachi, Ltd.
Tokyo Japan

HITACHI WORKS DWG. NO.
10S784-773

REV'D
1/2

Signature Not Verified
Digitally signed by Ravindra Kumar
Date: 2022.04.25 16:39:46
Reason: IRGPS-CRIS
Location: New Delhi

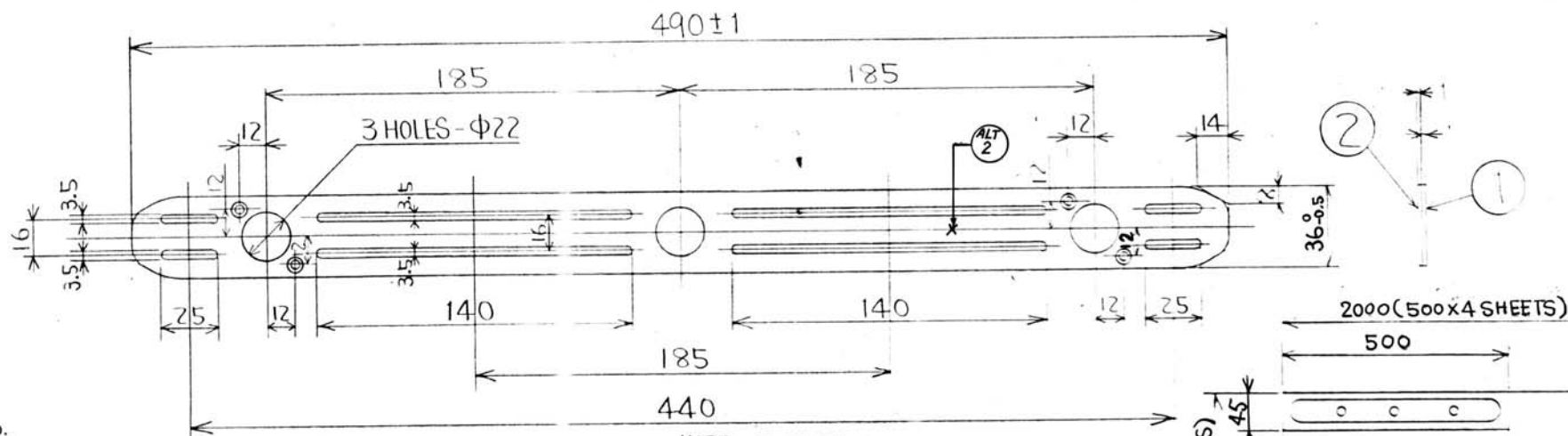
COVERING C&D NO.
5586/403, 5585/403
5584/403, 5583/403.

346152/2024/HEP-TXM20500

5/29

2. THE IDENTIFICATION MARK OF EACH FIRM HAS TO BE CUT PUNCH WITH THE HELP OF DIE ITSELF AT THE PLACE LOCATED IN THE DRAWING.

SYM.	REVISIONS	DATE	REVD.	CHKD.	RE DWG	MTR	RE MF
ALT. 1	ALTERNATE MATERIAL ADDED ON NOTE.	8-2-93					
2	NOTE-2 ADDED VIDE NOTE NO. EL/ITM/2013 PL. 24-2-98	26-2-98					



FOR ITEM No. 1

COVERING C&D. No.

5586/404, 5585/404,
5584/404, 5583/404

FOR ITEM No. 2

COVERING C&D. No.

5586/405, 5585/405,
5584/405, 5583/405.

NOTE:- MATERIAL:

ALT. 1 COLD ROLLED STAINLESS STEEL STRIP TO JIS G 4307 Gr. SUS-310S. OR AISI-304.

MATL. COMP:-
C - 0.08 max.
Si - 1.50 max.
Mn - 2.00 max.
P - 0.045 max.
S - 0.030 max.
Ni - 19.00 to 22.00
Cr - 24.00 to 26.00

PUNCHING METHOD

SEE NOTE	ITEM NO.	PARTS NAME	NO. OF PIECES PER MOTOR	NAME OF MATERIAL	RAW MATERIAL	SPECIFICATION	RAW WEIGHT OF MATERIAL PER MOTOR	FINISHED WEIGHT	REMARKS
2	1	LINER	6	SUS310S-17	400-2000 x 1/20	JISG4307	1.08 kg	0.67 kg	
1	1	LINER	6	SUS310S-17	400-2000 x 1/20	JISG4307	1.08 kg	0.67 kg	

DWN. S. Yamashiro	82-12-11	THIRD	TITLE HS-1050-ET/B, HS15250A
CHKD. S. Honishi	"	ANG. PROJ.	
APPD. T. Nakamada		SCALE 1/2	



Hitachi, Ltd.
Tokyo Japan

HITACHI WORKS DWG. NO.
10S784-774

REVD. 1/2

S 221351 (A3 DWG. PAPER)

Signature Not Verified

Digitally signed by Ravindra Kumar
Date: 2022.04.25 16:41:41 +05'30'

Reason: ITR PS-CRIS
Location: New Delhi

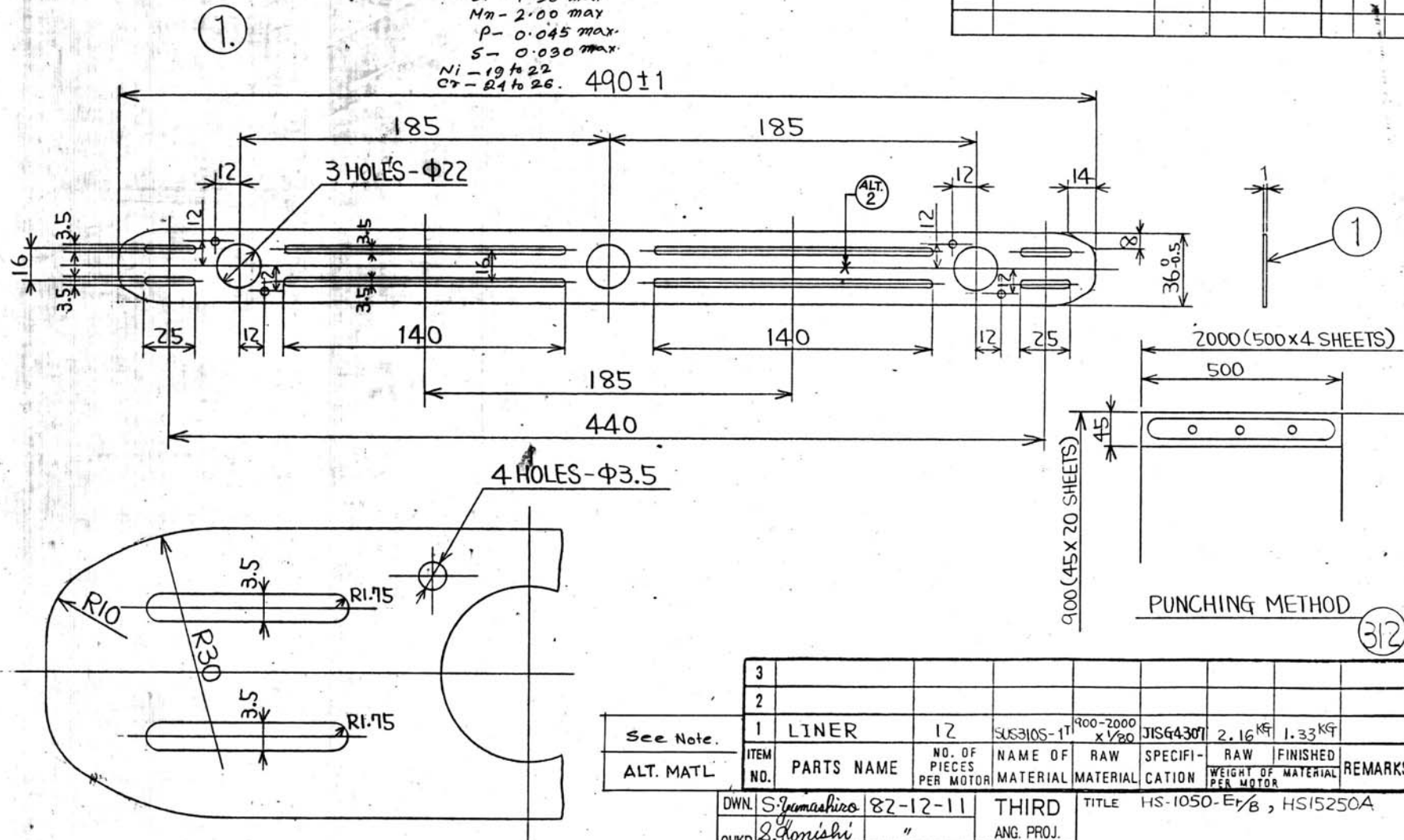
SCALE: 2/1

346452/2024/HEP-TXM20500

ALT. NOTE:
 MARK OF EACH FIRM HAS
 TO BE CUT PUNCH WITH THE HELP OF DIE ITSELF AT
 THE PLACE LOCATED IN THE DRAWING.

NOTE:- Material:-
 Cold rolled Stainless Steel Strip To JIS-G4307, Gr. SUS-304.
 Austenitic system:-
 Material Composition:-
 (Gr. SUS-310S)
 C-0.08 max.
 Si-1.50 max.
 Mn-2.00 max.
 P-0.045 max.
 S-0.030 max.
 Ni-19 to 22
 Cr-24 to 26. 490±1

SYM.	REVISIONS	DATE	REVD.	CHKD.	RE. DWG.	MTR.	RE. MF
ALT. 1	ALTERNATE MATERIAL ADDED ON NOTE	8-2-93					
2.	NOTE-2 ADDED VIDE NOTE NO. EL/TM/2013, Dt: 24.2.98	26-2-98					



SCALE: 2/1
 COVERING C&D NO.
 5586/401, 5585/401,
 5584/401, 5583/401.

See Note.	1	LINER	12	SUS310S-1T	400-2000 x 1/20	JISG4307	2.16 kg	1.33 kg	
ALT. MATL	ITEM NO.	PARTS NAME	NO. OF PIECES PER MOTOR	NAME OF MATERIAL	RAW MATERIAL	SPECIFICATION	RAW WEIGHT OF MATERIAL PER MOTOR	FINISHED WEIGHT OF MATERIAL PER MOTOR	REMARKS

DWN. S. Yamashiro 82-12-11 THIRD
 CHKD. S. Konishi " ANG. PROJ.
 APPD. H. Konomura REGD. SCALE 1/2

TITLE HS-1050-ET/B, HS15250A
 LINER
 HITACHI WORKS DWG. NO. 10S784-771
 REV'D. 1/2

Hitachi, Ltd.
 Tokyo Japan

Signature Not Verified
 Digitally signed by
 Ravindra Kumar
 Date: 2022.04.25
 16:35:02 +05'30'
 Reason: IIRPS-CRIS
 Location: New Delhi

This specification covers the supply of Stainless Steel Liners in 'SET' for manufacture of Traction Motor Type HS:15250A in Chittaranjan Locomotive Works.

2. SUPPLY CONDITION OF LINERS IN 'SET' AGAINST STOCKING
S. K. D. NO. 7119/5586/450

2.1 Tenderers shall quote their rates in sets for the following five liners.

Sl. No.	Description/Drg. No.	Qty/set
1.	5586/401 5585/401 5584/401 5583/401	Liner to Drg. No. 105.784.771 12 Nos
2.	5586/402 5585/402 5584/402 5583/402	Liner to Drg. No. 105.784.772 6 nos.
3.	5586/403 5585/403 5584/403 5583/403	Liner to Drg. No. 105.784.773 6 nos.
4.	5586/404 5585/404 5584/404 5583/404	Liner to Drg. No. 105.784.774. Item-1 6 nos.
5.	5586/405 5585/405 5584/405 5583/405	Liner to Drg. No. 105.784.774. Item-2. 6 nos.

NB: Liners shall confirm to the latest revision of the respective drawings.

2.2 SURFACE FINISH:

Material shall have glossy finish and free from burrs and surface defects.

2.3 TESTING:

Chemical analysis of each lot shall be carried out (picked up at random) by authorised representative of Addl. Chief CEM/CLM/CRJ or Govt. Regd. Laboratory or ISO approved laboratory. The material shall conform to the chemical composition indicated in the relevant drawings before dimensional check is performed by inspecting authority of CLM for prototype and bulk inspection.

Contd..2/-

CHKD.

SEE/TMD

Signature Not Specified FOR

INERS IN 'SET' FOR

Verified
Digitally signed by TACHU TRACTION MOTOR

Reason: IIRPS-CRIS
Date: 2022.11.25
16:08:17

Location: New Delhi

CHITTARANJAN LOCOMOTIVE WORKS

WEST BENGAL

DATE: 21.11.96
DY. CEE/TM - D

NO. 41 MS. 095.024

DATE : 21.11.96

PROTOTYPE SAMPLES:

One set of prototype sample shall be submitted by the successful tenderers to the Dy. Chief Electrical Engineer/TMD/CLW/Chittaranjan for dimensional check and approval before bulk manufacture.

1. ~~MAKING AND MARKING: The identification mark of each item has to be and punch on the top of the body of the plate under a drawing.~~
~~Manufacturer's identification mark shall be provided at one end on flat surface on each liner by indelible ink. No material with no accepted without proper identification mark.~~

It is to be ensured that each set of liners is to be separately tagged on both ends and packed by durable polythene packet separately and finally to be kept in wooden box.

10 (ten) sets of liners or part thereof shall be properly packed in one wooden box to ~~avoid~~ damage during handling and transportation. Two cards, indicating description of material against C&D No. 7119/5586/450, the description, Brg. No. of individual item and quantity duly signed, by CLW Inspector shall be tagged for one inside and other outside the wooden box.

5. ~~GUARANTEE~~

~~Suppliers shall guarantee the material against any manufacturing and/or workmanship defect for a period of 24 months from the date of supply.~~

6. INFORMATION TO BE FURNISHED BY THE TENDERERS IN THEIR OFFERS:

- 1) A list of plant and machinery available with them for manufacture, testing and inspection.
- 11) Deviation, if any, shall clearly be brought out indicating advantages in detail as a result of such deviation from specification, an offer without any justification regarding deviation is liable to be rejected.
- 111) Tenderers alongwith their quotation shall furnish documents regarding performance of their past supplies of such materials to Government Organisation/Public Sector Undertaking.

CHKD.

SEE/TMD-I

2.	DY.CEE/TM-D	GUARANTEE CLAUSE IN PARA.5 DELETED REF. L/NO. EL/TM/2013 dt. 14.12.98	16.12.98
1	DY.CEE/TMD	REJECT MARK AS PARA-4 MODIFIED WITH NOTE NO. 24-8-98 RE/TM/2003, DATED: 24-8-98.	24-8-98
AIM.	AUTHORITY	DESCRIPTION	INITIAL DATE

SPECIFICATION FOR
LINERS IN 'SET' FOR
HITACHI TRACTION MOTOR
TYPE HS:15250A.

21.11.96
DY. CEE/TM-D

CHITTARANJAN LOCOMOTIVE WORKS
WEST BENGAL
NO. 4THS. 095.024.
DATE : 21.11.96.