

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
RESEARCH DESIGN AND STANDARDS ORGANISATION

No. EL/3.2.15/Elg1

Manak Nagar, Lucknow-11
Dated 5-1982.

MODIFICATION SHEET No. RDSO/MM-4/127

1. TITLE OF MODIFICATION:

Improving the stiffness of Elgi Compressor Cooling Fan Blades by welding stiffening ring on the periphery of fan.

2. APPLICATION:

All Electric Locomotives where Elgi Compressor-TR 1000 have been fitted.

3. OBJECT:

Railways have been reporting frequent cases of breakage of Cooling Fan Blades on Elgi Compressor-TR 1000. The cases of foundation bolt becoming loose in service have also been experienced by the Railways.

Excessive vibration on these cooling fans appears to arise from heavy mass of cooling fan blades and their cantilever construction, which results in excessive stresses at the weld location of the hub.

1. TITLE: In order to reduce vibration on these compressors the following action should be taken:-

- (i) Provide M.S. stiffening ring of section 32 x 1.5mm on the outer periphery of the fan blades, by gas welding as indicated in the enclosed RDSO's drawing No. SKEL-3477.
- (ii) Carry out dynamic balancing of the fan at dynamic balancing machine.

4. MODIFICATION DRAWING No. - RDSO, SKEL-3477.

5. AGENCY OF MODIFICATION:

- (i) Electric Locomotives
- (ii) POH Shops while undertaking locos for POH, fitted with TR-1000 type Elgi Compressors.

6. MATERIAL REQUIRED:

Stiffening ring of M.S. sheet as per IS-226 having cross section 32 x 1.5 mm.

7. WORK TO BE CARRIED OUT:

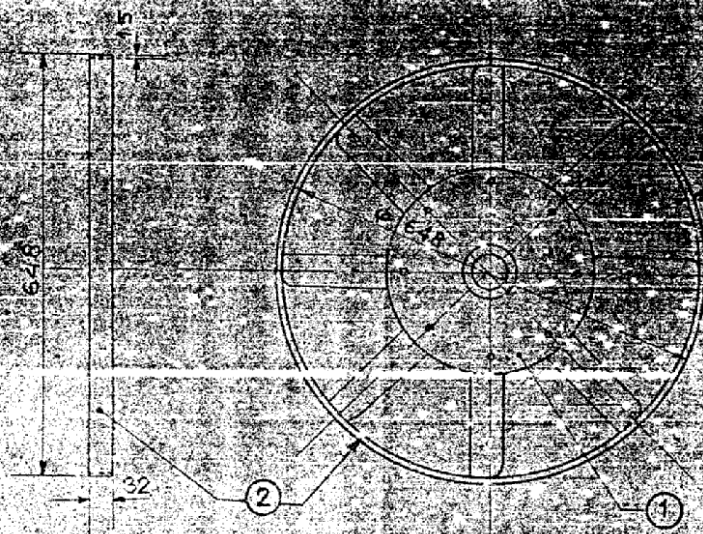
Gas weld the stiffening ring as shown in the enclosed sketch at the locations where rings come in contact with the blades surface.

DISTRIBUTION: As per list enclosed.

Encl: 1 above.

(Kamal Kumar)
For Director General (Elect.)

[illegible]



NOTE 1. ALL DIMENSIONS IN MM.
2. GAS WELDING

STIFFENING RING (32 x 4.5)

ELGH COMPRESSOR FAN

2. SHEET

L-25

7/11/2000

1/1/2000

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