



भारत सरकार
रेल मंत्रालय

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

सतत् टैम्पिंग मशीन (09-32.) की निरीक्षण जांच सूची

**INSPECTION CHECK LIST FOR CONTINUOUS
TAMPING MACHINE (09-32 CSM)**

रिपोर्ट संख्या-टी.एम.-74
Report No.TM - 74
(Revision-1 of 2014)

अक्टुबर-2014
October-2014

अनुसंधान अभिकल्प और मानक संगठन
लखनऊ-226011
RESEARCH DESIGNS & STANDARDS ORGANISATION
LUCKNOW- 226 011

INSPECTION OF CONTINUOUS TAMPING MACHINE (09-32)

Name & Designation of Inspecting Official :

Date of Inspection :

Machine No. :

Base Station /division :

Location of working :

Block hours :

progress :

1. General :

S. No	Items	Remarks given by inspecting officer
I.	Name of supervisor	
II.	Machine make	
III.	Year of manufacturing	
IV.	First POH of Machine done on	
V.	Last IOH of M/C done on	
VI.	Next IOH of M/C due on	
VII.	Last POH of M/C done on	
VIII.	Next POH of M/C due on	
IX.	Last POH of camping coach done on	
X.	Next POH of camping coach due on	
XI.	All log book filled properly	

History of Machine:-----

S. No.	Items	Prevailing Condition	
2.	Mode of Working		
I.	Pre and Post Tamping Operations being Done	Yes <input type="checkbox"/>	No <input type="checkbox"/>
II.	Depth of Clean Cushion under Sleeper (required min. is 150 mm)	Actual—	
		OK <input type="checkbox"/>	Less <input type="checkbox"/>
III.	Condition of Ballast	Caked <input type="checkbox"/>	clean <input type="checkbox"/>
IV.	Lining Working Method	3 point <input type="checkbox"/>	4point <input type="checkbox"/>
V.	Mode of working	smoothing <input type="checkbox"/>	design <input type="checkbox"/>
VI.	Lifting working mode	Proportional (smoothing) <input type="checkbox"/>	design <input type="checkbox"/>
VII.	Working method	Manual <input type="checkbox"/>	Measuring run <input type="checkbox"/>
VIII.	Hydraulic leakage from circuit	Location -----	
IX.	Pneumatic leakage from circuit	Location -----	
X.	Overall condition of the Machine.	Excellent <input type="checkbox"/>	Very good <input type="checkbox"/>
		Good <input type="checkbox"/>	Average <input type="checkbox"/>

Remarks.

3. Oil/water/level in tank/container

S. No.	Items	Agent / Description	Prevailing Condition		
			OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
I.	Hydraulic oil	servo System HLP68N or equivalent*	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
II.	Radiator	Water with coolant	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
III.	ZF Gear Box	CF-4 15W40	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
IV.	Diesel Oil	HSD	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
V.	Satellite Gear Box	SAE-90	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
VI.	Intermediate Gear Box	SAE-90	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
VII.	Reduction Gear Box	SAE-90	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
VIII.	Engine Lube oil	CF-4 15W40	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
IX.	Engine Lube oil on due date (After every 300hrs)	CF-4 15W40	Yes	<input type="checkbox"/>	No <input type="checkbox"/>
X.	Funk Gear Box	SAE-90	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
XI.	Driving Axle Gear Box I	SAE-90	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
XII.	Driving Axle Gear Box II	SAE-90	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
XIII.	Satellite Axle Gear Box	SAE-90	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
XIV.	Compressor lube oil (if used)	CF-4 15W40	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
XV.	Tamping unit oil tank LHS	servo System HLP68N or equivalent*	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>
XVI.	Tamping unit oil tank RHS	servo System HLP68N or equivalent*	OK	<input type="checkbox"/>	Need top up <input type="checkbox"/>

*equivalent of servo system HLP68N list issued by RDSO vide I.n.TM/HM/Oils dated dt.26/07/2012

Remarks

4. Filters

S. No.	Items	Prevailing Condition Remark	
I.	Cleaning of Air Cleaner filters outer (1no) (Cleaned after every 250hrs or on dirt indication and change after 500hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
II.	Change of air cleaner inner (1no) (after every 500hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
III.	Change of engine oil filters (1no) (after every 300 hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
IV.	Change of diesel filters (2nos) (To be done after every 300 hrs)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
V.	Change of ZF gear box filter (1no) (after every 500hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
VI.	Change of Servo valve filter (2nos) (after every 250hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
VII.	Change of Servo valve button filter (6nos) (after every 250hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
VIII.	Change of proportional valve filter (1no) (after every 250hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
IX.	Change of return filter (2nos) (after every 500hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
X.	Change of suction filter (4nos) (after every 500hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
XI.	Change of variable pump suction filter (2nos) (after every 500hrs or on choke indication)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
XII.	Change of air dryer filter if used (2nos) (after every 500hrs or at least once year)	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

Remarks-----

5. Lubrication (Oiling & Greasing as per maintenance schedule)

S.No.	Item	Agent / Description	Prevailing Condition	
5.1 Tamping units				
I.	Tamping unit guide column (Both bank)	Servo system- HLP68N or equivalent*	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
II.	Tamping arm Bolt (55mm)	Servo system- HLP68N or equivalent*	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
III.	Vibration shaft main bearing	Servo system- HLP68N or equivalent*	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
IV.	Connecting rod bolt (35mm pin)	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
V.	Vibration shaft main bearing cover leakage		Yes <input type="checkbox"/>	No <input type="checkbox"/>
Note- if machine is equipped with auto greasing unit for some part/section working of it should be ensured time to time				
5.2 Satellite				
I.	Satellite slide rollers	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
II.	Satellite support roller	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
III.	Satellite sliding plate (lateral)	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
IV.	Satellite sliding roller (horizontal)	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.3 Lifting and lining units				
I.	Clamp Pivot	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
II.	Lifting Unit Guide Column	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
III.	Lining rollers	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
IV.	Clamp Housing	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
V.	Lining cylinder pivot	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
VI.	Lifting roller clamp	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
VII.	Lifting unit locking	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

*equivalent of servo system HLP68N list issued by RDSO vide I.n.TM/HM/Oils dated dt.26/07/2012

Remarks-----

S.No.	Item	Agent / Description	Prevailing Condition	
5.4 Cardon shaft				
I.	Engine to ZF Gear Box	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
II.	ZF to Distributor Gear Box	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
III.	Engine to funk Gear Box	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
IV.	Distributor Gear Box to axle I	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
V.	Distributor Gear Box to intermediate shaft	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
VI.	Intermediate shaft to axle II	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
VII.	Reduction gear box to ZF gear box	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
5.5 Miscellaneous				
I.	Middle feeler rod bush	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
II.	Torque arm pivot	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
III.	Driving bogie Brake linkage	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
IV.	Running bogie Brake linkage	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
V.	pivot joint & bush of Front Trolley	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
VI.	pivot joint & bush of Rear Trolley	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
VII.	pivot joint & bush of Middle feeler Trolley	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
VIII.	pivot joint & bush of Lining Trolley	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
IX.	Axle gear box flange cover	Grease shell alvania RL2	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

Remarks-

6. Engine Model no.:

Engine hours on date-

S.no	Items	Prevailing Condition	
I.	Over-hauling of the Engine as per Main. Schedule	Due <input type="checkbox"/>	Not due <input type="checkbox"/>
II.	Starting problem	No <input type="checkbox"/>	Required attention <input type="checkbox"/>
III.	Condition of smoke	White <input type="checkbox"/> Normal <input type="checkbox"/>	Black <input type="checkbox"/>
IV.	Engine temperature during working a)If Cummins Engine: Optimum 75 to 85°C b)If Greaves Engine: Optimum 70 to 85°C	Actual ----- °C	
		Ok <input type="checkbox"/>	Required attention <input type="checkbox"/>
V.	Leakage in Head gasket	No <input type="checkbox"/>	Yes <input type="checkbox"/> (Head no.-)
VI.	Compressor leakage	Yes <input type="checkbox"/>	No <input type="checkbox"/>
VII.	Belt condition and tension	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
VIII.	Leakage of water from water pump, seal hose and radiator	No <input type="checkbox"/>	Required attention <input type="checkbox"/>
IX.	RPM of the Engine (rated 2100)	Actual---	
		Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>
X.	Engine oil pressure (minimum)		
XI.	Greaves (MWM) Minimum 1.5 at idle rpm Minimum 2.5 On rated rpm after 2 hrs working	Actual--- Actual---	
	or		
	Cummins (KTA 1150L) Minimum 1-2 Kg/cm ² at idle rpm Minimum 3-7 Kg/cm ² on rated rpm after 2 hours working	Actual--- Actual---	
XII.	Overall condition of Engine	Ok <input type="checkbox"/>	Need attention <input type="checkbox"/>

Remarks

7. Electrical and Electronics

S.no	Items	Prevailing Condition			
I.	Condition of battery terminals	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
II.	Condition of batteries	Ok	<input type="checkbox"/>	Not satisfactory	<input type="checkbox"/>
III.	Ammeter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
IV.	Condition of self starter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
V.	Condition of alternator	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
VI.	Condition of Depth transducer (2nos)	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
VII.	Condition of Lining transducer (2nos)	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
VIII.	Condition of Height transducer (2nos)	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
IX.	Working of Lining galvanometer	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
X.	Working of X- Level galvanometer (2nos)	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
XI.	Working of Lifting indication voltmeter LHS	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
XII.	Working of Lifting indication voltmeter RHS	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
XIII.	Safety circuit for Engine	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
XIV.	Safety circuit for Driving	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
XV.	Electrolyte level in batteries (Plates should be embedded in electrolyte)	Ok	<input type="checkbox"/>	Need top up	<input type="checkbox"/>
XVI.	Specific gravity of electrolyte (min 1.24)	Ok	<input type="checkbox"/>	Less	<input type="checkbox"/>

Remarks

8. Gauges and meters working status

S.no	Items	Prevailing Condition			
I.	RPM meter in Working Cabin	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
II.	RPM meter in Front Cabin	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
III.	Speedometer/Tachometer working Cabin	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
IV.	Speedometer/Tachometer front Cabin	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
V.	Engine Oil Pressure meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
VI.	Engine Temperature meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
VII.	ZF oil pressure meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
VIII.	ZF oil temperature meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
IX.	Battery charging meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
X.	Battery voltage meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
XI.	Hydraulic oil pressure meters	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
XII.	Hydraulic driving pressure meters	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
XIII.	Satellite brake pressure meters	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>
XIV.	Pneumatic pressure meter	Ok	<input type="checkbox"/>	Need attention	<input type="checkbox"/>

Remarks

9.Pneumatic

I.	Air Oiler working properly	Yes <input type="checkbox"/>	Need attention <input type="checkbox"/>
II.	Water separator working properly	Yes <input type="checkbox"/>	Need attention <input type="checkbox"/>
III.	Condition of brake shoes	Ok <input type="checkbox"/>	To be changed <input type="checkbox"/>
IV.	Clearance between brake shoes and wheel	Ok <input type="checkbox"/>	To be changed <input type="checkbox"/>
V.	Working of brake application	Satisfactory <input type="checkbox"/>	To be changed <input type="checkbox"/>
VI.	Working of unloader valve	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
VII.	Locking system of lifting/lining units	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
VIII.	Locking system of tamping units	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
IX.	Locking system of lining trolley	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
X.	Locking system of middle feeler trolley	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
XI.	Locking system of front feeler trolley	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
XII.	Locking system of measuring feeler trolley	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>
XIII.	Locking system of satellite	Satisfactory <input type="checkbox"/>	To be attended <input type="checkbox"/>

Remarks

10. Hydraulic pressure and operation

Sl no.	Items	Prevailing Condition	
		Recommended value	Actual value
I.	System Pressure	130-140	
II.	High Pressure System	150	
III.	Counter Pressure for small squeezing cylinder	35	
IV.	Squeezing Pressure for a)concrete sleepers	110 -120	
V.	ZF Oil Pressure	10 - 15	
VI.	Charging Pressure	30	
VII.	Accumulator pressure for		
	a) High pressure	100 (Max)	
	b) Working pressure	85 (Max.)	
VIII.	Vibration pressure LHS	150	
IX.	Vibration pressure RHS		
X.	Driving pressure	210	
XI.	Satellite Booster pressure	40-60	
XII.	Squeezing time	0.4 - 0.6 second	
XIII.	Air Pressure (in kg / cm ²)	6 – 7	
XIV.	Satellite brake pressure	2 bar & 5 bar	
XV.	Preload pneumatic pressure	3-5 bar	
XVI.	Pending Maintenance Schedule and reasons.	Schedule I,II,III,IV,V,VI,VII	
XVII.	Play in satellite support blocks (2 Nos)	Ok <input type="checkbox"/>	Excess <input type="checkbox"/>
XVIII.	Condition of Oil Coolers	Clean <input type="checkbox"/>	Clogged <input type="checkbox"/>
XIX.	Function of satellite axle support cylinder (2 nos)	Satisfactory <input type="checkbox"/>	Leaking <input type="checkbox"/>
XX.	Hydraulic Oil Temperature after working of machine for 2 hrs. (Max limit 76 ⁰ c)	----- °C	

Remarks

11. Miscellaneous:

Sl no.	Items	Prevailing Condition	
I.	Adjustment of track lifting roller height LHS	Ok <input type="checkbox"/>	To be adjusted <input type="checkbox"/>
II.	Adjustment of track lifting roller height RHS	Ok <input type="checkbox"/>	To be adjusted <input type="checkbox"/>
III.	Correction of alignment	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
IV.	Performance of Tamping unit up/down	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
V.	Performance of Lifting & Levelling	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
VI.	Performance of satellite	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>
VII.	Overall performance of Machine working	Satisfactory <input type="checkbox"/>	Need attention <input type="checkbox"/>

12. Safety Items:

Sl no.	Items	Prevailing Condition	
I.	Safety equipment as per Annexure-I	Available <input type="checkbox"/>	deficient <input type="checkbox"/>
II.	Working of safety Emergency Braking System of the machine	Ok <input type="checkbox"/>	Defective <input type="checkbox"/>
III.	Competency certificate of operator	Current <input type="checkbox"/>	Expired <input type="checkbox"/>
IV.	Strength of staff	Full <input type="checkbox"/>	deficient <input type="checkbox"/>
V.	Safety awareness	Excellent <input type="checkbox"/> Good <input type="checkbox"/>	V. Good <input type="checkbox"/> Average <input type="checkbox"/>
VI.	Staff due for Medical	Yes <input type="checkbox"/>	No <input type="checkbox"/>
VII.	Visual and Physical inspection of wheel shall be done at a frequency of once in a year or after every 1000 engine running hours whichever is earlier	Done <input type="checkbox"/>	Not done <input type="checkbox"/>
VIII.	Ultrasonic testing of axles of machine shall be done between 40,000 to 45,000 kms of running engine hours or three years, whichever is earlier.	Done <input type="checkbox"/>	Not done <input type="checkbox"/>

Remarks

Signature of inspecting authority

List of Safety Equipments

S. No.	Description	Quantity
1.	Detonators in a tin case	1 box
2.	H.S. flag red	2 nos.
3.	H.S. flag green	1 nos.
4.	H.S. Tri colour lamps	2 nos.
5.	Chain & Padlock	1 set
6.	Clamp with Padlock	2 nos.
8.	10 t jack	1 no.
9.	Crow bars	4 nos.
10.	Wooden blocks off sizes	8 nos.
11.	Gauge cum level	1 no.
12.	Rail thermometer (dial type)	1 no.
13.	Banner flag	2 nos.
14.	Portable Control Phone	1 no
15.	First Aid Box	1 no
16.	Skids	2 nos.
18.	Working time table of section where machine working	1 copy
19.	G&SR book with upto date amendment slips	1 copy
20.	4 cell flasher light	1 no.
21.	Petromax /LPG lamps	1 no.
22.	Safety helmets	Machine staff
23.	Protective clothing, safety shoes and safety gloves	Machine staff
24.	Track Machine Manual	1 no.
25.	Accident Manual	1 no.
26.	Fire extinguisher	1 no.
27.	Hooter (manual)	2 nos.)
28.	Hydraulic Hand Pump	1 no.
29.	Emergency pneumatic/Hydraulic hose of sizes suiting to different machines(complete with end fittings)	1 no.

List of spare Parts

S. No.	Description	Part No.	Quantity
A.	TAMPING UNIT		
1	Seal Kit set	HZS DS.243	2 Nos
2	Piston	2E 36.443	2 Nos
3	Piston screw	2E.36.48	2 Nos
4	Threaded pin	M6X18	2 Nos
5	Hex socket head cap screw	M8X20	4 Nos
6	Spring washer	8Din 7980	4 Nos
7.	Hex nut	M24X1	2 Nos
8.	Spring washer	B24 Din 127	2 Nos
9.	Disc	25Din 1440	2 Nos
10.	Spring washer	16Din 7980	2 Nos
11.	Hex socket head cap screw	M16X75	2 Nos
12.	Hex socket head cap screw	M16X35	8 Nos
13.	Lock washer	VS16	4 Nos
14.	Connecting rod bolt (35 mm pin)	G.20.13	2 Nos
15.	Toothed disc	F2116	4 Nos
16.	Threaded pin	M6X8	2 Nos
17.	Piston	2E35.303	2 Nos
18.	Seal kit	HZS.DS.401	2 Nos
19.	Bearing bush	2E35.211	2 Nos
20.	Hex bolt	M20X70	2 Nos
21.	Adjusting screw	2E11.30	2 Nos
22.	Hex nut	M42X1	2 Nos
23.	Spring washer	B42Din127	2 Nos
24.	Disc	2E32.05	2 Nos
25.	Bolt	2E31.04	2 Nos
26.	Spring washer	B20Din127	16 Nos
27.	Adjusting screw	E60.08AAS	1 No.
28.	Hex socket head cap bolt	M20X40	4 Nos
29.	Hex bolt	M20X50	10 Nos
30.	Disc	2E31.19 ARJ	10 Nos
31.	Hex bolt	CU30.406	10 Nos
32.	Toothed disc	5 Din 6797	10 Nos
33.	Chord	EL-T576.1.35	7 mtrs
34.	Potentiometer	EL-T500	01 No.
35.	Cheese head screw	M3X25	4 Nos

ANY OTHER OBSERVATIONS:

ACKNOWLEDGEMENT

Following officers and staff have made their valuable contributions in finalization of the revision -1 of Inspection Check List for Continuous Tamping Machine (09-32).

RDSO

1. S/Shri Muslim Ahmad ARE/TM
2. S/Shri D.G.Sharma SSE/TM