

RAIL COACH FACTORY, KAPURTHALA

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Mech/M&P/3100/GM/39 Rev.- NIL	Testing Jig for SIEMENS Control System	

Designation	Name	Signature	Date	Level
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Issue/ Rev	Changes	Date

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1.0 IMPORTANT INSTRUCTIONS TO TENDERERS FOR FILLING TECHNICAL BID

- 1.1 Bidders are required to give clause wise comments on the technical specifications, confirming compliance/non-compliance with details of deviations if any along with their effect on the performance. Back references to be avoided, offers are likely to be ignored in case of non-compliance of these instructions for furnishing the information.
- 1.2 Unless otherwise stated, latest alterations/ revisions of specifications/ standards/ drawings shall be applicable. In respect of safety standards and environmental standards relevant to the machine, the machine manufacturers shall ensure compliance with international (CE/ISO/DIN/JIS)/National standards (IS) (wherever applicable).
- 1.3 Tenderers should offer and quote for all the specified concomitant accessories, as these are considered essential for commissioning and utilization of the machine. Even if bidder does not recommend the purchase any of these accessories, the price must be quoted for comparison purposes and their recommendation/suggestion indicated in the offer. Tenderers should also quote for optional accessories, spares and consumable spares as asked in the specifications.
- 1.4 In case, any item is required in sets, please specify nos./pieces per set. This is essential for proper technical evaluation of the offer. Offers received without this may be considered as incomplete and liable to be rejected.
- 1.5 The bidder should quote only for the specified make of sub-assemblies and equipment wherever specified. Makes of sub-systems other than the specified ones will normally not be acceptable. In case, some other make is quoted, specific reasons for the same including its features/advantages over specified makes must be brought out in the offer.
- 1.6 In case there is a contradiction in any information provided (some parametric values given in the specification and those given in the brochure or some other document enclosed by the tenderer), unless specifically mentioned in the deviation cum confirmation statement the values as given in the specification shall be taken as confirmed by the tenderer and offer evaluated accordingly.
- 1.7 The Purchaser may accept internationally accepted alternative specifications which ensure equal or higher quality than the specifications mentioned in the Technical Specification. However, the decision of the Purchaser in this regard shall be final.
- 1.8 Purchaser reserves the right to verify the details submitted by the bidder by actual site visits.
- 1.9 Other terms & condition of the contract will be as per Indian Railway Standard conditions of contract.

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2.0 PURPOSE

Testing Jig for SIEMENS Control System is required.

3.0 DESCRIPTION AND SCOPE OF SUPPLY

The scope of supply covers design, manufacture, supply, installation and commissioning of SIEMENS testing jig having 3 axis and one spindle for 840D SL controller required for imparting on hand training on SIEMENS controller and for testing the various components of the controller. SIEMENS testing jig shall be comprises of kit having all components required to realise the understanding of complete SIEMENS based control system. Other concomitant accessories / equipment which the manufacturer considers essential to make the machine fully operational when installed and commissioned with requirement of utilities, etc if any, should be clearly indicated by tenderer in the offer.

3.1 The total value of the offer will be calculated on.

- i. The cost of the basic machine.
- ii. Cost of the concomitant accessories according to tenderer specification.
- iii. Cost of any other accessory treated as concomitant accessory.
- iv. Application duties and taxes, insurance, freight and installation and Commissioning charges.

4.0 GENERAL FEATURES

4.1 Main parameters should conform to 'Schedule I' of this specification.

4.2 The machine should be capable of operating in severe workshop conditions of dust, temperature between 0° C to 50° C and humidity up to 98%. The system should be capable of working under these conditions.

4.3 The following literature in English should accompany the machine on delivery.

- i. 02 copies of operating and services manuals.
- ii. 02 copies of spares catalogue and part list.
- iii. 02 copies of itemized major and minor preventive maintenance schedules.

5.0 CONCOMITANT ACCESSORIES

5.1. The tenderer shall supply a list of concomitant accessories, which will be supplied along with the machine. The cost of each listed concomitant accessory should be quoted separately. Wherever for any reason the cost of any concomitant accessory is included in the basic price of the machine the same should be specifically mentioned.

5.2. Any other accessory, which in the opinion of the tenderer can contribute to higher production rates, should be indicated and quoted separately.

6.0 SPARES

6.1. The tenderer should furnish details of spares covered under warranty.

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- 6.2. The tenderer should be furnishing the price list of spare parts required for two years normal maintenance of the equipment. Sources of supply of spares used other than that of manufacturer should be furnished by the tenderer.
- 6.3. List of recommended spares for normal maintenance after expiry of warranty period to till useful life of the equipment.
- 6.4. List of recommended consumables, oil & lubricant for two years shall be quoted separately.
- 6.5. Useful life estimated/expected for each equipment and its sub assembly should be indicated by the tenderers

7.0 COMMISSIONING AND PROVING OUT :-

- 7.1. The Successful tenderer shall have to commission the machine within 15 days from the date of receipt of machine at RCF,Kapurthala.
- 7.2. The successful tenderer shall have to prove out the performance of the machine at RCF premises to the entire satisfaction of the consignee.

8.0 ELIGIBILITY CRITERIA

- 8.1. The tenderer shall be registered on IREPS website (www.ireps.gov.in) to participate in the tendering process.
- 8.2. The tenderer shall have established quality control system and organization to ensure adequate control at all stages of the manufacturing process.
- 8.3. The tenderer shall provide a performance statement giving a list of major supplies of same/similar equipments effected in last 5 years to the reputed organizations giving details of the order no. and date and the quantity supplied and whether the supply was made within the delivery schedule. Such period shall be reckoned from the date of opening of tender. Tenderer should also provide the prove out test certificate of his supply/supplies.
Tenderer not submitting the requisite information may note that his offer is liable to be ignored.

9.0 TECHINCAL LITERATURE

- 9.1. One copy of the printed illustrative catalogue showing isometric view/sketch & features of the machine and its elements must be enclosed with each copy of the bid.
- 9.2. The successful tenderer will have to furnish for each machine 02 copies of spare parts catalogue giving the part list number of each component with exploded views and assembly drawings, maintenance manual, trouble shooting guide, operational manual of the machine.

10.0 SPECIAL FEATURES

Special features incorporated into the machine, if any shall be indicated separately by the tenderer, clearly indicating the advantage of these features.

11.0 MAKE

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- 11.1 The supplier shall furnish the complete details of Model No. Make & Manufacturer's details/ address, Country and authorization details of Dealership.
- 11.2 The firm shall provide the calibration certificate of National / International Traceability along with validity of at least two years.

12.0 SERVICING FACILITIES

- 12.0 The tenderer shall clearly spell out in the offer about the facility available with him or his agent/dealer for providing adequate after sales service in Punjab during warranty period.
- 12.1 The tenderer shall also indicate the service organization located at various places in India and availability of trained staff, maintenance spares etc.
- 12.2 The contractor shall give a comprehensive spare part list with OEM details and price for all the sub systems.
- 12.3 The tenderer/contractor shall provide list of spares, consumables required for maintenance for 5 years after completion of warranty period
- 12.4 For maintenance during warranty following criteria shall be considered.
- A) Service engineer of the supplier shall be available for attending to the system faults during first 07 days after successful commissioning of equipments during 09.00 - 17.00 hrs on all working days including Saturdays.
 - B) Service engineers shall visit RCF on quarterly basis thereafter till the end of warranty/extended warranty period for Preventive Maintenance at least for one full day at a time.
 - C) In case of any breakdown affecting the performance of the system completely or partly, firm shall depute its service engineer as soon as and when informed by any suitable means like Fax, SMS or email possible after receiving such call.
 - D) Breakdown period shall be calculated from 8 hours after it's reporting to the firm upto the time it is attended. If intimation to the firm is delayed from Railway's side, then the breakdown period calculation will start from the time by which it is reported to the firm.
- 12.5 Total up time of the system should be at least 90%. Up time shall be counted in following manner:-
- A) Total breakdown of less than 8 hours shall be ignored for the purpose of this calculation.
 - B) Penalty may be imposed if the down time is more than 10% without any valid reasons. The levy of token penalty as deemed fit based on the merit of the case may also be consider as per clause 17 (b) of GCC -201.
- 12.6 Warranty period for part or machine shall be extended after completion of warranty period by the duration under which the part or machine remains under breakdown during warranty.
- 12.7 Tenderer shall provide list of spares, consumables required for maintenance for 5 years after completion of warranty period as per annexure-A

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- 12.8 Tenderer shall provide expected life for the components of the system and provide the maintenance schedule required for 10years for as per annexure -A
- 12.9 Tenderer shall provide the service charges /per day/per man for deputing service engineer on the machine on requirement separately for Indian and Foreign engineer.

13.0 DEVIATIONS:

The tenderer should clearly certify that the machine offered fully meets the specification various design features incorporated in the machine to fulfil different technical performance requirements should be fully explained in the offer. However, minor deviations from this specification, which do not affect or in any way interfere with the stipulated performance standards, or would result in improved safety/reliability or would reduce recurring maintenance/operating cost of the machine, can be considered for acceptance.

14.0 SCHEDULE OF ANNUAL MAINTENANCE CONTRACT (AMC) FOR PERIOD OF 5 YEARS AFTER COMPLETION OF WARRANTY PERIOD

- 14.1 Tenderer shall provide proposal for 5 year Annual Preventive Maintenance schedule to be executed after completion of warranty period in the format as per annexure-B.
- 14.2 The firm shall maintain the machine in good working condition during the contract period and shall correct the fault or failures, repair or replace the worn or defective parts/equipment during the normal working hours of shop where the equipment has been installed. Unserviceable parts/equipment need to be replaced at no extra cost with brand new parts/equivalent or superior specification.
- 14.3 The firm shall respond by deputing service personal to oral / telephonic/ or other modes of intimation for repair and maintenance of the said machines [within 2 hours](#).
- 14.4 The firm shall ensure that the machine is in proper working condition, to the full capacity, after repair and maintenance.
- 14.5 To have a timely supply of spares during AMC, the contractor shall furnish a total list of spares which should contain list of spares that shall be arranged by the firm, both chargeable, duly mentioning the charge against each item, and spares which shall be non-chargeable, and list of spares to be held by RCF.
- 14.6 The contractor shall clearly list-out the list of consumables required for day-to-day operation of the machine. It shall be the scope of RCF to arrange the consumables once the completion certificate is issued for the retrofitted machine.
- 14.7 The tenderer/contractor shall provide suitable standby when repairs exceeds 2 hours. When any equipment is taken for repair to the tenderer/contractor's premises suitable standby equipment should be provided.
- 14.8 Besides attending the breakdown calls, the firm shall attend to the corrective and preventive maintenance of the machines once in a month.

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- 14.9 The AMC is valid for five years from the date of completion of the warranty period . No freight is admissible.
- 14.10 During the AMC period, whatever equipment is defective shall be handed over to RCF. During completion of the AMC period the machines should be handed over in full working condition to its full capacity.
- 14.11 The firm should maintain a register duly indicating the nature of defects and repair attended and got signed by RCF authority. Preventive maintenance schedule should be made. The schedule should be made in such a way that more than one machine should not be attended on the same day. A copy of the schedule should be given to RCF at the beginning of the AMC and the schedule should be strictly followed and on carrying out the preventive maintenance the same should be entered in the register and got signed by RCF authority.
- 14.12 AMC charges shall be paid quarterly as one quarter of the total AMC charges applicable for that year on submission of bills duly certified by the engineers in charge with regard to the satisfactory execution of AMC during the period for which the bill is claimed. Duties & taxes as applicable at the time of payment shall be deducted at source.

ANNEXURE-A

S.N.	ITEM	PART NO.	SERVICE LIFE	PRICE

ANNEXURE –B

S.N.	YEAR	AMC CHARGES
1.	IST YEAR	
2.	IIND YEAR	
3.	IIIRD YEAR	
4.	IVTH YEAR	
5.	VTH YEAR	

15.0 WARRANTY

The warranty condition of contract will be as per IRS conditions or as quoted by the tenderer whichever is later.

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SCHEDULE – I
SUPPLY OF 840DSL TRAINING KIT PACKAGE

PACKAGE SHALL INCLUDE THE BELOW LIST MATERIAL

POS.	ARTICLE NUMBER	ARTICLE DESCRIPTION	QTY.
1	6FC5371-0AA30-0AB0	Sinumerik; 840d SL; NCU 710.3bpn with PLC 317-3PN/DP	1
2	6FC5851-1YG44-2YA0	CNC software, 4.7 SP2, CF with license	1
3	6FC5851-1YC44-2YAB	CNC software (toolbox), CD/DVD	1
4	6FC5800-0AA00-0YB0	Controllable interpolation axes, extension	1
5	6FC5800-0AS00-0YB0	Operation, Sinumerik operate on NCU (S00)	1
6	6FC5800-0AP67-0YB0	Diagnostics, access my machine /OPC UA (P67)	1
7	6FC5800-0AP56-0YB0	Programming support, DXF reader (P56)	1
8	6FC5800-0AP25-0YB0	Simulation, 3D simulation1 (machined part) (P25)	1
9	6GK5005-0BA00-1AA3	Switch scalance x005 unmanaged, IP30	1
10	6FC5203-0AF04-1BA1	OP 08T TCU integrated (membrane keys, 640x480 pixel)	1
11	6FC5303-0AF22-0AA1	MCP 483C PN (mechanical keys, width 483 mm)	1
12	6FC9320-5DC01	Hand wheel with front pannel76mmx76mm	1
13	6FC5311-0AA00-0AA0	I/O module PP 72/48 D PN	1
14	6FX8002-2CP00-1AD0	connecting cable; connecting cable; 3.0 m	1
15	6GK1901-1BB10-2AA0	Connector; 180 degrees	10
16	6XV1840-2AH10	Connecting cable; Ethernet (universal use)- in meters	20
17	6SL3060-4AH00-0AA0	Drive-clio cable; drive-clio cable (in fixed lengths) IP 20/IP20 (fixed mounting); 0.26m	1
18	6EP1436-2BA10	Sitop smart 20.00 a	1
		Drive system/supply system	
19	6SL3130-6AE15-0AB1	Smart line module; 5.00 kw	1
20	6SL3120-2TE13-0AD0	Double motor module; 3.00 A for the following axes x+y	1
21	6SL3000-0CE15-0AA0	Line choke	1
		X/Drive system/ Supply system	
22	6FX5002-5CS06-1AD0	Motor supply cable; motion-connect 500 without brake cable, full thread (fixed mounting) S120R; 3.0	1
23	6FX5002-2DC10-1AD0	Drive- clio cable; drive- clio cable motion connect 500 IP20/IP67 fixed mounting);3.00m	1
24	1FK7042-2AF71-1RG0	Synchronous servo motor (feed motor) 1ft/1fk; 0.82 kw; shaft height 48mm	1
		Y/ drive system/supply system	
25	6FX5002-5CS06-1AD0	Motor supply cable; motion connect 500 without brake cable, full thread (fixed mounting) S120R; 3.0 m	1
26	6FX5002-2DC10-1AD0	Drive- cliq cable; drive-cliq cable motion- connect	1

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		500 IP20/IP67 (fixed mounting); 3.0 m	
27	1FK7042-2AF71-1RG0	Synchronous servo motor (feed motor) 1ft/1ft; 0.82 kw; shaft height 48mm	1
		Z / drive system/supply system	
28	6SL3120-1TE13-0AD0	Single motor module; 3.00 a	1
29	6FX5002-5DS06-1AD0	Motor supply cable; motion connect 500 with brake cable,full thread(fixed mounting) 3.00 m	1
30	6FX5002-2DC10-1AD0	Drive- cliq cable; drive-cliq cable motion- connect 500 IP20/IP67 (fixed mounting); 3.0 m	1
31	1FK7042-2AF71-1RH0	Synchronous servo motor (feed motor) 1ft/1ft; 0.82 kw; shaft height 48mm	1
		SP/drive system/supply system	
32	6SL3120-1TE21-0AD0	Single motor module; 9.00 A	1
33	6FX8002-5CP17-1AD0	Motor supply cable; motion -connect 800 plus without brake cable, full thread (trailing-type) S120R; 3.0 m	1
34	6FX5002-2DC10-1AD0	Drive- cliq cable; drive-cliq cable motion- connect 500 IP20/IP67 (fixed mounting); 3.0 m	1
35	1PH8083-1SF00-0LA1	1PH8; asynchronous; 2.80 kw shaft height 80mm	1

6ES7717-1BC00-0AC1	I76820EQ (2,8 BIS 3,5 Ghz; 4 kerne+ hyper-threading; 8MB smart cache); 15,6" display full HD (1920x 1080); WLAN 802. 11AC & Bluetooth v4.0 DVD +/- RW; HD Grafik 530 1x16GB ddr4 SDRAM so-dimm 1TB SSD sata (2,5") Ohne S5- online- Schnittstelle/S5-EPROMMER netzleitung mit netzstecker; europa; tastatur: qwertz/qwerty windows 7 ultimate sp1 64 – bit; step 7 & wincc combo: step 7 prof. combo (v14 & 2010), wincc adv. combo (v14 & flex 2008) v14.0.0.0 step 7 prof. v14; wincc adv. v14; step 7 prof. 2010 sr4; wincc flex. 2008 sp3
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Note: Tenderer to furnish following detail of the Testing Jig for SIEMENS Control System offered

S.no.	Technical Parameter	Offered by Tenderer

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