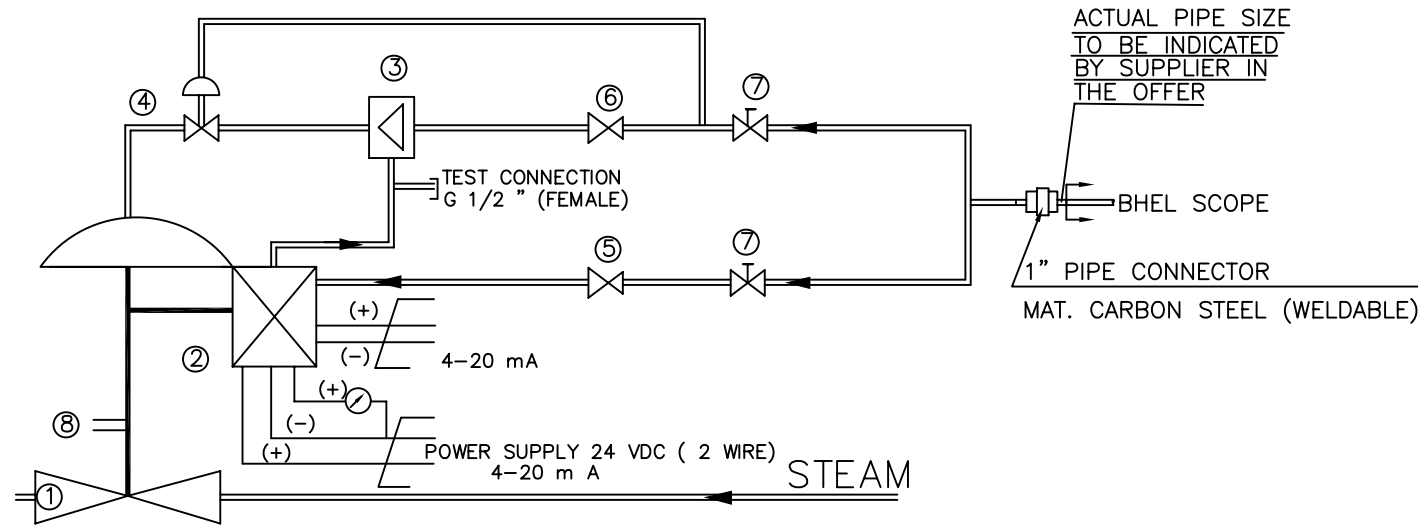


00061-62221-2  
DRAWING NO. 2-13239-19000



VALVE DATA: -

VALVE TO BE SIZED TO MEET FOLLOWING OPERATING CONDITION:	
OPERATING PARAMETERS	OPERATING CONDITION
INLET PRESSURE	15.69 bar(abs)
OUTLET PRESSURE	1.048 bar(abs)
TEMPERATURE	320°C
FLOW RATE	1.3023 kg/sec.
FLUID	STEAM
DESIGN PRESSURE	54 bar(abs)
DESIGN TEMPERATURE	360°C

03

NOTE: -

THE SUPPLIER TO KEEP ATLEAST 10% MARGIN OVER THE REQUIRED Cv WHILE SELECTING THE VALVE.

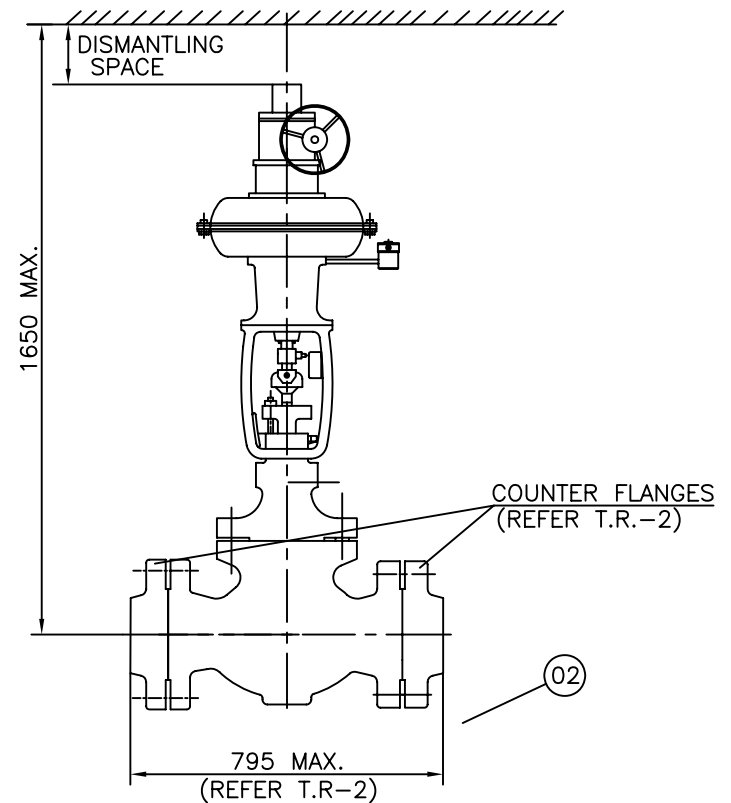
SCHMATIC DIAGRAM FOR CONTROL VALVE OF SEAL STEAM SYSTEM

ITEM DESCRIPTION
1. CONTROL VALVE FUNCTION: AIR TO OPEN SPRING TO CLOSE
2. I/P-POSITIONER
3. AIR VOLUME BOOSTER
4. BLOCKING VALVE
5. FILTER AND REDUCING STATION
6. FILTER AND REDUCING STATION
7. STOP VALVE G 1/4"
8. STEAM LEAKAGE CONNECTION DIA. 13.5X2.6 FROM VALVE

ACTUATOR DATA: -

PNEUMATIC TUBING	
ACUTATOR MODEL	
SPRING RANGE	
AIR SUPPLY	
CLOSING/OPENING TIME	3 sec.
PNEUMATIC CONNECTION *	
POSITIONER	I/P - POSITIONER (SEE VARIANT TABLE)
INPUT CONTROL SIGNAL	4 TO 20 mA.
DEGREE OF PROTECTION OF POSITIONER	IP 65
ELECTRONIC POSITION FEEDBACK TRANSMITTER FOR BHEL USE	2 WIRE TYPE, NON CONTACT, 4~20 mA OUTPUT, 24 V DC

\* - SUPPLIER TO INFORM END CONNECTION DETAIL



PROPOSED ARRANGEMENT OF SEAL STEAM SUPPLY VALVE

VARIANT TABLE :-

MAT. CODE	VAR.	TYPE OF POSITIONER	APPLICABLE SPECIFICATION NO.
W90313239215	00	SMART TYPE POSITIONER	41810250001
---	01	CONVENTIONAL	---

21323912000  
Ref. Drawing No.

Sign & Date  
Inventory No.

REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED

CHANGED AS PER C/ADV.NO. STE-11-F0125

CHANGED AS PER C/ADV.NO. STE-10-F0214.

THIS DRG. SUPERSEDES THE OLD DRG. UNDER THE SAME NO. AS PER CHANGE ADVICE NO. STE-10-F0153.

GMS No./ CBOM No.		STATUS OF DRG	
AGREED DEPT	NAME	SIGN	DATE
CIE	B.S.RANA	-SD-	15.6.10

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		STEAM TURBINE	
DEPT	STE	SCALE	WEIGHT (KG)
CODE 4011	NTS	100.00 (APPX.)	
TITLE : SEAL STEAM VALVE WITH PNEU. ACTUATOR		CARD CODE	DRAWING NO.
		7	2-13239-19000
			22/23/24
		SHEET No. 01	No. OF SHEETS 02

00061-62231-2  
DRAWING No.

**TECHNICAL REQUIREMENTS:-**

A. TECHNICAL REQUIREMENTS OF VALVE ALONG WITH PNEUMATIC ACTUATOR WITH HAND WHEEL, AIR VOLUME BOOSTER, AIR LOCKING SYSTEM FOR STAY PUT ACTION, ASSOCIATED PIPES AND CONNECTORS SHALL BE AS FOLLOWS:-

1. FUNCTION :- AIR TO OPEN, SPRING TO CLOSE.
2. VALVE TO BE SUPPLIED ALONGWITH COUNTER FLANGES (RAISED TYPE), ASSOCIATED FASTENERS AND SEALINGS FOR INLET & OUTLET AS PER ASME B16.5-2003. VENDOR TO SUPPLY COUNTER FLANGES OF MATERIAL GRADE ASTM A105 TO MATCH WITH PIPE SIZE  $\phi 219.1 \times 6.3$  (IN BHEL SCOPE). THE FACE TO FACE DISTANCE OF THE VALVE SHALL CONFORM TO ASME B16.10-2000 AND DIMENSION SHOWN IN THE ARRANGEMENT DRAWING SHALL BE COMPLIED.
3. BODY MATERIAL : ASTM A216 WCC.
4. (i) VALVE CHARACTERSTICS : EQUAL PERCENTAGE.  
(ii) VALVE TYPE : FLOW TO CLOSE.  
(iii) VALVE CLASS : ASME CLASS 600
5. THE ACTUATOR SHALL ALSO BE CAPABLE OF MANUAL OPERATION. PROVISION SHALL BE PROVIDED BY THE VENDOR FOR MANUAL RELEASE OF AIR WHICH GETS TRAPPED IN THE ACTUATOR IN CASE VALVE IS ON "STAYPUT" DURING AIR SUPPLY FAILURE.
6. AMBIENT TEMPERATURE = 65°C.
7. MAXIMUM APPLIED GRAVITY 2g.
8. STRENGTH & LEAK TIGHTNESS TEST : AS PER CLASS IV ANSI B16.104.
9. PERMISSIBLE VELOCITY IN THE PIPE LINE IS 100 m/sec.
10. MOUNTING FRAME FOR REGULATOR, POSITIONER, AIR LOCK RELAY, AIR VOLUME BOOSTER, AIR FILTER & REGULATOR TO BE SUPPLIED ALONG WITH MAIN SUPPLY BY THE VENDOR.
11. NOISE LEVEL: 85 db AT A DISTANCE OF 1 MTR.
12. Cv TEST SHALL BE CARRIED OUT BY THE SUPPLIER FOR THE VALVE & TEST REPORT SHALL BE SUBMITTED FOR BHEL REVIEW. THE Cv TEST CAN BE CARRIED OUT PHYSICALLY ON THE VALVE OR THRU COMPUTER SIMULATION. IN CASE TEST REPORT IS ALREADY AVAILABLE WHICH IS NOT MORE THAN 5 YEARS OLD ON THE DATE OF BID OPENING, THE SAME SHALL BE ACCEPTABLE. FURTHER, IN CASE THE OFFERED VALVE IS ALREADY IN SUCCESSFUL OPERATION USING THE SAME VALVE BODY, SEAT & TRIM COMBINATION, THE SUPPLIER SHALL FURNISH NAME OF PROJECT, DATA SHEET, CROSS-SECTIONAL DRAWING OF THAT VALVE FOR REVIEW IN LIEU OF THE Cv TEST REPORT.

B. DOCUMENTS TO BE SUBMITTED ALONG WITH THE OFFER:

1. DATA SHEET OF VALVE & ACTUATOR ALONGWITH SIZING CALCULATIONS.
2. DETAIL CATALOGUE MENTIONING TYPE OF POSITION TRANSMITTER, POSITION CONTROLLER, VOLUME BOOSTER, AIR LOCK RELAY, AIR FILTER & REGULATOR.
3. VALVE CHARACTERISTICS.
4. MINIMUM CONTROLLED FLOW THROUGH VALVE AT P=15.69 bar.
5. CONTROLLABLE RANGE OF Cv.
6. OPERATION AND MAINTENANCE MANUAL OF VALVE, ACTUATOR, POSITIONER & POSITION TRANSMITTER.
7. GENERAL ARRANGEMENT DRAWING OF VALVE/ACTUATOR ALONG WITH BUILT IN PRESSURE REDUCING STATION AND ELECTRO-PNEUMATIC POSITION CONTROLLER.
8. PRICED LIST OF RECOMMENDED SPARES OF VALVE, ACTUATOR AND AIR LOCKING SYSTEM FOR FUTURE ORDERING.

9. TOTAL WEIGHT OF VALVE ALONG WITH COUNTER FLANGES AND ACTUATOR.
10. OVERALL DIMENSIONS OF VALVE INCLUDING DISMANTLING DIMENSION.
11. BILL OF MATERIAL OF VALVE AND ACTUATOR.
12. RECOMMENDED QUALITY & QUANTITY OF AIR.
13. REQUIRED SUPPLY AIR PRESSURE, SPRING RANGE, TUBING/CONNECTION SIZE.

C. DOCUMENTS TO BE SUBMITTED AFTER PLACEMENT OF PURCHASE ORDER:

1. SUPPLIER TO NOTE THAT IN THE EVENT OF ORDERING THE FOLLOWING DOCUMENTS ARE REQUIRED TO BE SUBMITTED WITHIN 4 WEEKS OF PLACEMENT OF PURCHASE ORDER & GOT APPROVED BY BHEL BEFORE START OF ANY MANUFACTURING ACTION. WHILE SUBMITTING THE DOCUMENTS THE VENDOR TO CLEARLY MENTION THE EXCEPTIONS W.R.T. THE DOCUMENTS ALREADY APPROVED EARLIER BY BHEL AGAINST SIMILAR PROJECTS:  
(i) SEAL STEAM SUPPLY VALVE DRAWING, DATA SHEET & BILL OF MATERIAL.  
(ii) SEAL STEAM SUPPLY VALVE SCHEMATIC DIAGRAM WITH ACTUATOR, POSITIONER, FILTERS & GAUGES.
2. THE VALVE SHALL BE FUNCTIONALLY TESTED TO CHECK IT'S DESIGN CHARACTERISTICS. TEST REPORT SHALL BE SUBMITTED BY THE VENDOR.
3. 21 SETS OF O & M MANNUALS SHALL BE SUPPLIED BY THE VENDOR WITH IN 12 WEEKS FROM THE DATE OF PLACEMENT OF P.O.

D. GENERAL REQUIREMENTS:

1. GURANTEE: GURANTEE/WARRENTEE PERIOD SHALL BE 24 MONTHS FROM THE DATE OF SHIPMENT OR 18 MONTHS FROM THE DATE OF COMMISSIONING WHICHEVER IS EARLIER. INCASE OF ANY FAILURE OR TROUBLE REPORTED FROM SITE, THE SUPPLIER WOULD DEPUTE THEIR REPRESENTATIVE IMMEDIATELY TO ATTEND THE PROBLEM AND REPLACE THE DEFECTIVE COMPONENT/PARTS IF REQUIRED.
2. PACKING & DESPATCH:  
(i) THE VALVE SHALL BE PACKED AND LOCKED IN SUCH A WAY, THAT IN GENERAL CASE ANY DAMAGE IS PROHIBITTED.  
(ii) ALL OPENINGS SHALL BE PLUGGED.  
(iii) AS FAR AS POSSIBLE NECESSARY ACCESSORY DEVICES FOR TRANSPORTATION PURPOSE SHALL BE ATTACHED TO THE VALVE AND/OR TO THE PACKING e.g. LIFTING EYES & LIFTING SIGNS.  
(iv) BEARING AREAS SHALL BE MARKED IF NECESSARY.

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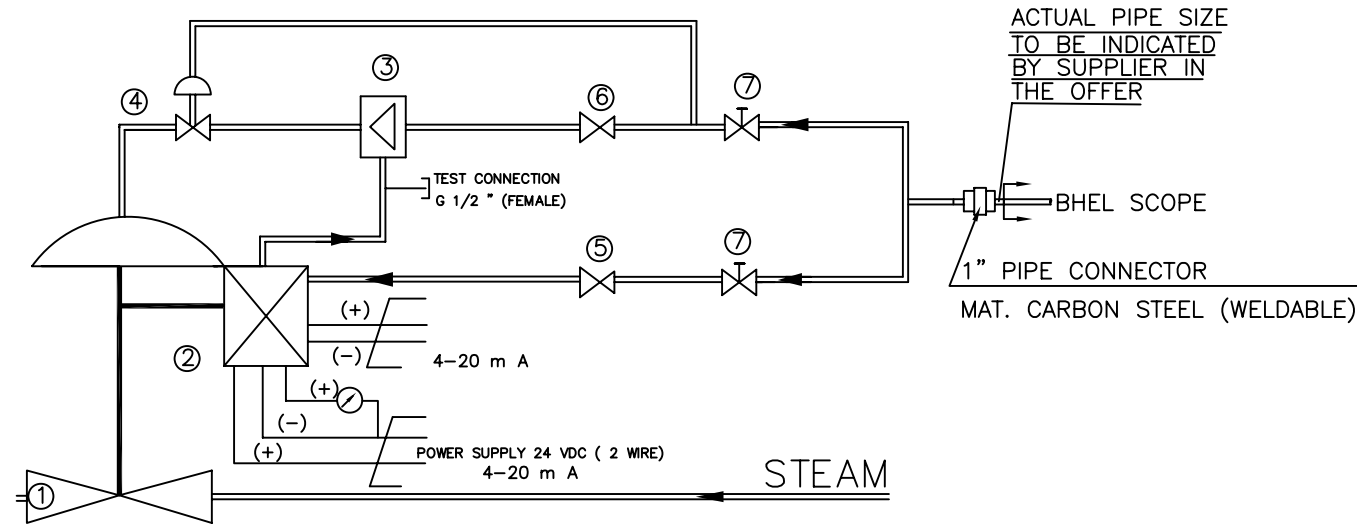
21323912000  
Ref Drawing No

Sign & Date  
Inventory No

REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED

GMS No./ CBOM No.		STATUS OF DRG		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT			
AGREED DEPT	NAME	SIGN	DATE	STEAM TURBINE			
CIE	B.S.RANA	-SD-	15.6.10				
GRADE OF UNTOL.DIM							
M/CG.- $\phi$ /M/ $\phi$ AA0230208							
WELDING-A/B/ $\phi$ / $\phi$ AA0621104							
GAS CUTTING-'T3'AA0621101							
REV 01		DATE 23.06.10		REV 02		DATE 07.09.10	
ALTERED UVERMA sd/-		CHECKED SHUBHAM sd/-		ALTERED H. GARG sd/-		CHECKED S.MITTAL sd/-	
DEPT STE				SCALE		WEIGHT (KG)	
CODE 4011				NTS		100.00 (APPX.)	
REF. TO ASSY. DRG.				ITEM No.		NO. OF ITEMS	
-				-		75 74	
TITLE : SEAL STEAM VALVE WITH PNEU. ACTUATOR				CARD CODE		DRAWING NO.	
				7		2-13239-19000	
						22 23 24	
SHEET No. 02				No. OF SHEETS 02			

00161-04231-2-13240-19100  
DRAWING No.



**SCHEMATIC DIAGRAM FOR CONTROL VALVE OF LEAK OFF STEAM SYSTEM**

**VALVE DATA :-**

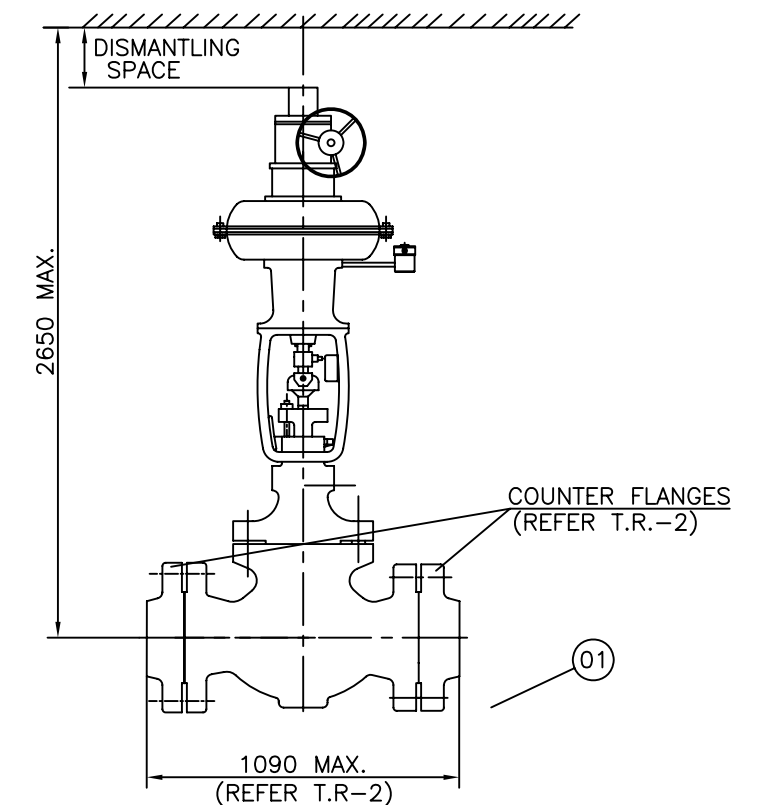
INLET WORKING PRESSURE	1.048 BAR (abs)
OUTLET PRESSURE	0.5 BAR (abs)
TEMPERATURE	391°C
FLOW RATE	1.34 Kg/Sec.
FLUID	STEAM
DESIGN PRESSURE	54 BAR (abs)
DESIGN TEMPERATURE	410°C

**NOTE:-**  
THE SUPPLIER TO KEEP ATLEAST 10% MARGIN OVER THE REQUIRED Cv WHILE SELECTING THE VALVE.

**ACTUATOR DATA :-**

PNEUMATIC TUBING	
ACTUATOR	
SPRING RANGE	
AIR SUPPLY	
CLOSING/OPENING TIME	3 sec.
PNEUMATIC CONNECTION *	
POSITIONER	I/P - POSITIONER (SEE VARIANT TABLE)
INPUT CONTROL SIGNAL	4 TO 20 mA.
DEGREE OF PROTECTION OF POSITIONER	IP65
ELECTRONIC POSITION FEEDBACK	2 WIRE TYPE, NON CONTACT, 4~20 mA OUTPUT, 24 V DC

\* - SUPPLIER TO INFORM END CONNECTION DETAIL



**PROPOSED ARRANGEMENT OF LEAKAGE STEAM CONTROL VALVE**

**ITEM DESCRIPTION**

1. CONTROL VALVE FUNCTION: AIR TO OPEN SPRING TO CLOSE
2. I/P-POSITIONER
3. AIR VOLUME BOOSTER
4. BLOCKING VALVE
5. FILTER AND REDUCING STATION
6. FILTER AND REDUCING STATION
7. STOP VALVE G 1/4"

**VARIANT TABLE :-**

MAT. CODE	VAR.	TYPE OF POSITIONER	APPLICABLE SPECIFICATION NO.
W90313240264	00	SMART TYPE POSITIONER	41810250001
--	01	CONVENTIONAL	--

21324019000  
Ref Drawing No

Sign & Date

Inventory No

GMS No./ CBOM No.		STATUS OF DRG		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		STEAM TURBINE	
AGREED DEPT	NAME	SIGN	DATE				
CIE	B.S.RANA	-SD-	15.6.10				
GRADE OF UNTOL.DIM				BHARAT HEAVY ELECTRICALS LTD. RANIPUR, HARDWAR			
M/CG.-Ø/M/Ø AA0230208				DRN NISHU - sd - 07.06.10			
WELDING-Ø/B/Ø/Ø AA0621104				CHD S.M. - sd - 15.06.10			
GAS CUTTING-'T3'AA0621101				APPD R.C.A. - sd - 16.06.10			
REV	DATE	ALTERED	sd/-	REV	DATE	ALTERED	sd/-
02	31.05.11	CHECKED SHUBHAM	sd/-	01	07.09.10	CHECKED S.MITTA	sd/-
CHANGED AS PER C/ADV.NO. STE-11-F0126				CHANGED AS PER C/ADV.NO. STE-10-F0215.			
DEPT STE		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.		ITEM No.	
CODE 4011		NTS	APPROX.1100	-		75 77	
TITLE : LEAKAGE STEAM CONTROL VALVE WITH PNEU. ACTUATOR				DRAWING NO.		2-13240-19100	
				CARD CODE		22 23 24	
				SHEET No. 01		No. OF SHEETS 02	

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00161-07281-2  
DRAWING NO. 2-13240-19100

**TECHNICAL REQUIREMENTS:-**

A. TECHNICAL REQUIREMENTS OF VALVE ALONG WITH PNEUMATIC ACTUATOR WITH HAND WHEEL, AIR VOLUME BOOSTER, AIR LOCKING SYSTEM FOR STAY PUT ACTION, ASSOCIATED PIPES AND CONNECTORS SHALL BE AS FOLLOWS:-

1. FUNCTION :- AIR TO OPEN, SPRING TO CLOSE.
2. VALVE SHALL BE SUPPLIED ALONGWITH SUITABLE COUNTER FLANGES (RAISED TYPE), ASSOCIATED FASTENERS AND SEALINGS FOR INLET & OUTLET AS PER ASME B16.5-2003. VENDOR TO SUPPLY COUNTER FLANGES OF MATERIAL GRADE ASTM A105 TO MATCH WITH PIPE SIZE  $\phi 273.1 \times 6.35$  (IN BHEL SCOPE). THE FACE TO FACE DISTANCE OF THE VALVE SHALL CONFORM TO ASME B16.10-2000 AND DIMENSION SHOWN IN THE ARRANGEMENT DRAWING SHALL BE COMPLIED.
3. VALVE BODY MATERIAL : ASTM A217 WC6.
4. VALVE MUST BE OPEN AT  $\Delta P=25$  bar.
5. (i) VALVE CHARACTERISTICS : EQUAL PERCENTAGE.  
(ii) VALVE TYPE : FLOW TO OPEN.  
(iii) VALVE CLASS : ASME CLASS 600.
6. THE ACTUATOR SHALL ALSO BE CAPABLE OF MANUAL OPERATION. PROVISION SHALL BE PROVIDED BY THE VENDOR FOR MANUAL RELEASE OF AIR WHICH GETS TRAPPED IN THE ACTUATOR IN CASE VALVE IS ON "STAYPUT" DURING AIR SUPPLY FAILURE.
7. AMBIENT TEMPERATURE = 65°C.
8. MAXIMUM APPLIED GRAVITY 2g.
9. STRENGTH & LEAK TIGHTNESS TEST : AS PER CLASS IV ANSI B16.104.
10. PERMISSIBLE VELOCITY IN THE PIPE LINE IS 100 m/sec.
11. MOUNTING FRAME FOR REGULATOR, POSITIONER, AIR LOCK RELAY, AIR VOLUME BOOSTER, AIR FILTER & REGULATOR TO BE SUPPLIED ALONG WITH MAIN SUPPLY BY THE VENDOR.
12. NOISE LEVEL: 85 db AT A DISTANCE OF 1 MTR.
13. Cv TEST SHALL BE CARRIED OUT BY THE SUPPLIER FOR THE VALVE & TEST REPORT SHALL BE SUBMITTED FOR BHEL REVIEW. THE Cv TEST CAN BE CARRIED OUT PHYSICALLY ON THE VALVE OR THRU COMPUTER SIMULATION. IN CASE TEST REPORT IS ALREADY AVAILABLE WHICH IS NOT MORE THAN 5 YEARS OLD ON THE DATE OF BID OPENING, THE SAME SHALL BE ACCEPTABLE. FURTHER, IN CASE THE OFFERED VALVE IS ALREADY IN SUCCESSFUL OPERATION USING THE SAME VALVE BODY, SEAT & TRIM COMBINATION, THE SUPPLIER SHALL FURNISH NAME OF PROJECT, DATA SHEET, CROSS-SECTIONAL DRAWING OF THAT VALVE FOR REVIEW IN LIEU OF THE Cv TEST REPORT.

B. DOCUMENTS TO BE SUBMITTED ALONG WITH THE OFFER:

1. DATA SHEET OF VALVE & ACTUATOR ALONGWITH SIZING CALCULATIONS.
2. DETAIL CATALOGUE MENTIONING TYPE OF POSITION TRANSMITTER, POSITION CONTROLLER, VOLUME BOOSTER, AIR LOCK RELAY, AIR FILTER & REGULATOR.
3. VALVE CHARACTERISTICS.
4. MINIMUM CONTROLLED FLOW THROUGH VALVE AT P=15.69 bar.
5. CONTROLLABLE RANGE OF Cv.
6. OPERATION AND MAINTENANCE MANUAL OF VALVE, ACTUATOR, POSITIONER & POSITION TRANSMITTER.
7. GENERAL ARRANGEMENT DRAWING OF VALVE/ACTUATOR ALONG WITH BUILT IN PRESSURE REDUCING STATION AND ELECTRO-PNEUMATIC POSITION CONTROLLER.
8. PRICED LIST OF RECOMMENDED SPARES OF VALVE, ACTUATOR AND AIR LOCKING SYSTEM FOR FUTURE ORDERING.

9. TOTAL WEIGHT OF VALVE ALONG WITH COUNTER FLANGES AND ACTUATOR.
10. OVERALL DIMENSIONS OF VALVE INCLUDING DISMANTLING DIMENSION.
11. BILL OF MATERIAL OF VALVE AND ACTUATOR.
12. RECOMMENDED QUALITY & QUANTITY OF AIR.
13. REQUIRED SUPPLY AIR PRESSURE, SPRING RANGE, TUBING/CONNECTION SIZE.

C. DOCUMENTS TO BE SUBMITTED AFTER PLACEMENT OF PURCHASE ORDER:

1. SUPPLIER TO NOTE THAT IN THE EVENT OF ORDERING THE FOLLOWING DOCUMENTS ARE REQUIRED TO BE SUBMITTED WITHIN 4 WEEKS OF PLACEMENT OF PURCHASE ORDER & GOT APPROVED BY BHEL BEFORE START OF ANY MANUFACTURING ACTION. WHILE SUBMITTING THE DOCUMENTS THE VENDOR TO CLEARLY MENTION THE EXCEPTIONS W.R.T. THE DOCUMENTS ALREADY APPROVED EARLIER BY BHEL AGAINST SIMILAR PROJECTS:  
(i) LEAKAGE STEAM CONTROL VALVE DRAWING, DATA SHEET & BILL OF MATERIAL.  
(ii) LEAKAGE STEAM CONTROL VALVE SCHEMATIC DIAGRAM WITH ACTUATOR, POSITIONER, FILTERS & GAUGES.
2. THE VALVE SHALL BE FUNCTIONALLY TESTED TO CHECK IT'S DESIGN CHARACTERISTICS. TEST REPORT SHALL BE SUBMITTED BY THE VENDOR.
3. 21 SETS OF O & M MANNUALS SHALL BE SUPPLIED BY THE VENDOR WITH IN 12 WEEKS FROM THE DATE OF PLACEMENT OF P.O.

D. GENERAL REQUIREMENTS:

1. GURANTEE: GURANTEE/WARRENTEE PERIOD SHALL BE 24 MONTHS FROM THE DATE OF SHIPMENT OR 18 MONTHS FROM THE DATE OF COMMISSIONING WHICHEVER IS EARLIER. INCASE OF ANY FAILURE OR TROUBLE REPORTED FROM SITE, THE SUPPLIER WOULD DEPUTE THEIR REPRESENTATIVE IMMEDIATELY TO ATTEND THE PROBLEM AND REPLACE THE DEFECTIVE COMPONENT/PARTS IF REQUIRED.
2. PACKING & DESPATCH:  
(i) THE VALVE SHALL BE PACKED AND LOCKED IN SUCH A WAY, THAT IN GENERAL CASE ANY DAMAGE IS PROHIBITTED.  
(ii) ALL OPENINGS SHALL BE PLUGGED.  
(iii) AS FAR AS POSSIBLE NECESSARY ACCESSORY DEVICES FOR TRANSPORTATION PURPOSE SHALL BE ATTACHED TO THE VALVE AND/OR TO THE PACKING e.g. LIFTING EYES & LIFTING SIGNS.  
(iv) BEARING AREAS SHALL BE MARKED IF NECESSARY.

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21324019000  
Ref. Drawing No.

Sign & Date  
Inventory No.

GMS No./ CBOM No.		STATUS OF DRG	
AGREED DEPT	NAME	SIGN	DATE
CIE	B.S.RANA	-SD-	15.6.10
GRADE OF UNTOL.DIM			
M/CG.- $\phi$ /M/ $\phi$ AA0230208			
WELDING- $\phi$ /B/ $\phi$ / $\phi$ AA0621104			
GAS CUTTING-'T3'AA0621101			
REV	DATE	ALTERED	sd/-
02	31.05.11	CHECKED SHUBHAM	sd/-
REV	DATE	ALTERED	sd/-
01	07.09.10	CHECKED H. GARG	sd/-
CHANGED AS PER C/ADV.NO. STE-11-F0126		CHANGED AS PER C/ADV.NO. STE-10-F0215.	

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		STEAM TURBINE			
BHARAT HEAVY ELECTRICALS LTD. RANIPUR, HARDWAR		DRN	NISHU	- sd -	07.06.10
		CHD	S.M.	- sd -	15.06.10
		APPD	R.C.A.	- sd -	16.06.10
DEPT	STE	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM No.
CODE 4011		NTS	APPROX.1100	-	-
TITLE : LEAKAGE STEAM CONTROL VALVE WITH PNEU. ACTUATOR		CARD CODE	DRAWING NO. 2-13240-19100		
			SHEET No. 02 No. OF SHEETS 02		