

Area/Unit	Sr.No	Location	Valve model	Tag #	Make
Phase I					
HRSG # 1	1	HP DRUM A	1727WB-2-S-100-F3-WSC	SGA-PSV-1001A	Consolidated
HRSG # 1	2	HP DRUM B	1737WB-2-S-100-F3-WSC	SGA-PSV-1001B	Consolidated
HRSG # 1	3	S H	1727WE-2-S-100-F3-WSC	SGG-PSV-1002	Consolidated
HRSG # 1	4	IP DRUM	2765B-1-XL-WSC-RL	SGA-PSV-1003	Consolidated
HRSG # 1	5	IP HEADER	2745B-1-XL-WSC-RL	SGH-PSV-1004	Consolidated
HRSG # 1	6	LP DRUM.A	1811MB-0-3X1-22-WSC	SGA-PSV-1005A	Consolidated
HRSG # 1	7	LP DRUM.B	1811PB-0-3X1-22-WSC	SGA-PSV-1005B	Consolidated
HRSG # 2	8	HP DRUM A	1727WB-2-S-100-F3-WSC	SGA-PSV-2001A	Consolidated
HRSG # 2	9	HP DRUM B	1737WB-2-S-100-F3-WSC	SGA-PSV-2001B	Consolidated
HRSG # 2	10	S H	1727WE-2-S-100-F3-WSC	SGG-PSV-2002	Consolidated
HRSG # 2	11	IP DRUM	2765B-1-X1-WSC-RL	SGA-PSV-2003	Consolidated
HRSG # 2	12	IP HEADER	2745B-1-X1-WSC-RL	SGH-PSV-2004	Consolidated
HRSG # 2	13	LP DRUM A	1811MB-0-3X1-22-WSC	SGA-PSV-2005A	Consolidated
HRSG # 2	14	LP DRUM B	1811PB-0-3X1-22-WSC	SGA-PSV-2005B	Consolidated
Phase II					
HRSG # 3	15	HP DRUM A	1737WB-2-S-X1-T15-F1-RL-CLS	21SGA91AA191	Consolidated
HRSG # 3	16	HP DRUM B	1737WB-2-S-X1-T15-F1-RL-CLS	21SGA91AA192	Consolidated
HRSG # 3	17	HP MAIN PIPE	1737WE-2-S-108-F1-RL-CLS	21SGG01AA191	Consolidated
HRSG # 3	18	IP FEED WATER	1912-00DC-2-CC-MS-33-RF-LA	21FWA70AA191	Consolidated
HRSG # 3	19	IP DRUM	1811LB-0-3X1-22-CLS	21SGA95AA191	Consolidated
HRSG # 3	20	IP MAIN PIPE	1811LB-0-3X1-22-CLS	21SGH01AA191	Consolidated
HRSG # 3	21	LP DRUM	1905-00LC-1-CC-TD-33-RF-SS-HP	21SGA98AA192	Consolidated
HRSG # 3	22	DA	1905-00LC-1-CC-TD-34-RF-SS-HP	21SGA98AA191	Consolidated
HRSG # 3	23	COND. MAIN PIPE	1910-30HC-1-CC-MS-33-RF-LA	21FWC01AA191	Consolidated
HRSG # 4	24	HP DRUM A	1737WB-2-S-X1-T15-F1-RL-CLS	22SGA91AA191	Consolidated
HRSG # 4	25	HP DRUM B	1737WB-2-S-X1-T15-F1-RL-CLS	22SGA91AA192	Consolidated
HRSG # 4	26	HP MAIN PIPE	1737WE-2-S-108-F1-RL-CLS	22SGG01AA191	Consolidated
HRSG # 4	27	IP FEED WATER	1912-00DC-2-CC-MS-33-RF-LA	22FWA70AA191	Consolidated
HRSG # 4	28	IP DRUM	1811LB-0-3X1-22-CLS	22SGA95AA191	Consolidated
HRSG # 4	29	IP MAIN PIPE	1811LB-0-3X1-22-CLS	22SGH01AA191	Consolidated
HRSG # 4	30	LP DRUM	1905-00LC-1-CC-TD-33-RF-SS-HP	22SGA98AA192	Consolidated
HRSG # 4	31	DA	1905-00LC-1-CC-TD-34-RF-SS-HP	22SGA98AA191	Consolidated
HRSG # 4	32	COND. MAIN PIPE	1910-30HC-1-CC-MS-33-RF-LA	22FWC01AA191	Consolidated

Phase III					
STG3	66	MOTIVE STM INTLET		30LBB30AA901	IMI Bopp & Reuther
STG3	67	MOTIVE STM OUTLET		30LBG10AA901	IMI Bopp & Reuther
HRS# 5	33	LP Drum SV No. 1	HSJ-16 TYPE C	31HAD10AA901	AGCO/CROSBY
HRS# 5	34	LP Drum SV No. 2	HSJ-16 TYPE C	31HAD10AA902	AGCO/CROSBY
HRS# 5	35	IP Drum SV No. 1	HCI-36	31HAD30AA901	AGCO/CROSBY
HRS# 5	36	IP Drum SV No. 2	HCI-36	31HAD30AA902	AGCO/CROSBY
HRS# 5	37	HP Drum SV No. 1	HE-86	31HAD50AA901	AGCO/CROSBY
HRS# 5	38	HP Drum SV No. 2	HE-B6	31HAD50AA902	AGCO/CROSBY
HRS# 5	39	LP Stm Outlet SV	HSJ-16 TYPE C	31LBD10AA901	AGCO/CROSBY
HRS# 5	40	IP Stm Outlet SV	HCI-36	31LBA30AA901	AGCO/CROSBY
HRS# 5	41	HP Stm Outlet SV	HCI-99W	31LBA50AA901	AGCO/CROSBY
HRS# 5	42	RH Stm Outlet SV	HCI-79 TYPE C	31LBB40AA901	AGCO/CROSBY
HRS# 5	43	RH Stm Inlet SV No.1	HCI-46	31LBC30AA901	AGCO/CROSBY
HRS# 6	44	LP Drum SV No. 1	HSJ-16 TYPE C	32HAD10AA901	AGCO/CROSBY
HRS# 6	45	LP Drum SV No. 2	HSJ-16 TYPE C	32HAD10AA902	AGCO/CROSBY
HRS# 6	46	IP Drum SV No. 1	HCI-36	32HAD30AA901	AGCO/CROSBY
HRS# 6	47	IP Drum SV No. 2	HCI-36	32HAD30AA902	AGCO/CROSBY
HRS# 6	48	HP Drum SV No. 1	HE-86	32HAD50AA901	AGCO/CROSBY
HRS# 6	49	HP Drum SV No. 2	HE-86	32HAD50AA902	AGCO/CROSBY
HRS# 6	50	LP Stm Outlet SV	HSJ-16 TYPE C	32LBD10AA901	AGCO/CROSBY
HRS# 6	51	IP Stm Outlet SV	HCI-36	32LBA30AA901	AGCO/CROSBY
HRS# 6	52	HP Stm Outlet SV	HCI-99W	32LBA50AA901	AGCO/CROSBY
HRS# 6	53	RH Stm Outlet SV	HCI-79 TYPE C	32LBB40AA901	AGCO/CROSBY
HRS# 6	54	RH Stm Inlet SV No.1	HCI-46	32LBC30AA901	AGCO/CROSBY
Phase IV					
HRS# 7	55	HP DRUM A	1737B-2-S-X1-I15-F3-RL	40HAD51 AA901	Consolidated
HRS# 7	56	HP DRUM B	1737B-2-S-X1-I15-F3-RL	40HAD51 AA902	Consolidated
HRS# 7	57	HP MAIN PIPE	1729E-3-S-X1-I25-F3	n/a	Consolidated
HRS# 7	58	IP FEED WATER	2-1811KB-0-6X1-22	n/a	Consolidated
HRS# 7	59	IP DRUM	4-1811NB-0-6X1-22	40HAD21 AA901	Consolidated
HRS# 7	60	IP MAIN PIPE	4-1811NB-0-3X1-22-LP	40HAD21 AA901	Consolidated
HRS# 7	61	LP DRUM-1	4-1811PM-0-3X1-22-LP	40HAD41 AA901	Consolidated
HRS# 7	62	LP DRUM-2	4-1811PM-0-3X1-22-LP	40HAD41 AA901	Consolidated
HRS# 7	63	Cold Re- Entry SV-2	6-1811QB-0-6X1-22	40LBC31 AA902	Consolidated
HRS# 7	64	Cold Re- Entry SV-1	6-1811QB-0-6X1-22	40LBC31 AA901	Consolidated
HRS# 7	65	COND. MAIN PIPE	4-1811PD-0-6X1-22	40LBB31 AA901	Consolidated



Tender No.59/2025

Subject: Three-Year Service Agreement for Calibration, On-line Testing, Full-Stroke Verification and Refurbishment of Safety Valves (HRSG)



1. Purpose

Samra Electric Power Company (SEPCO) requests firm quotations to provide a three-year service agreement for maintenance, online verification, full-stroke testing (where required/approved), calibration and off-site refurbishment of all safety valves associated with Heat Recovery Steam Generators (HRSGs). The objective is to ensure safety valves meet ASME Section I / National Board requirements, OEM design intent and to eliminate recurring incidents of valves failing to achieve full lift or opening partially, as identified in recent operational events (e.g., HP Superheater Outlet Safety Valve S/N SD20992 failing to prevent pressure accumulation beyond MAAP, reaching 138 barg despite set pressure of 121.8 barg). Services must incorporate root cause analysis and corrective measures for partial/non-opening issues, prioritizing full-stroke verification to confirm relief of full design capacity without relying solely on partial stroke or cracking tests.

2. Scope of Work

The contractor shall supply all labor, supervision, tools, test equipment, lifting devices, auxiliary lift devices, safety equipment, transport, and documentation necessary to perform the work. Work includes both on-site (in-service) and off-site (bench) activities as required.

2.1. On-Site Services: Online Pressure Setting and Testing

- Carry out the online pressure setting verification of the HRSG Safety Valves listed below using certified Auxiliary Lift Devices
- **Investigative Analysis:** Conduct a thorough investigation to determine the root cause of recent incidents where HP Safety

Valves failed to achieve full-stroke lift, leading to system over-pressurization. This shall include a review of operational data, valve condition, and previous maintenance reports.

- **Full Stroke/Live Test:** Based on the investigation, the contractor shall propose and, upon approval, conduct a "Full Stroke Test/Live Test" to definitively verify the valves' capacity to relieve the full design pressure of the system. The contractor must provide a detailed procedure, a list of requirements, and all necessary tools and equipment for this test.

2.2. Off-Site Services: Refurbishment and Calibration

For valves that require removal from the line for major servicing:

- **Pre-testing:** Document the as-found condition and set pressure of each valve upon receipt.
- **Disassembly and Cleaning:** Completely strip and clean all valve components.
- **Assessment:** Perform a detailed inspection of all parts, including dimensional checks and non-destructive testing (NDT) as required, to identify wear, damage, or defects. A detailed report of findings for each valve is required.
- **Refurbishment:** Refurbish valves by lapping seats, replacing soft goods.
- **Reassembly and Calibration:** Reassemble, pressure test, and calibrate each valve to its specified set pressure on a certified test bench.
- **Finishing and Sealing:** label, and secure the adjustment mechanism of each valve.

2.3. List of Safety Valves

The service agreement covers the following safety valves:

Qty	Style / Type	Manufacturer	Location
14	1700 / 1800/ 2700 Series	Dresser/ Baker Hughes	Ph1 HRSG
18	1700 / 1800/ 1900 Series	Dresser/ Baker Hughes	Ph1 HRSG
22	H-SERIES ISOFLEX DIRECT SPRING SAFETY VALVE	Crosby/ Emerson	Ph3 HRSG
2	Si 8–SERIES API Safety Relief Valve	Bopp & Reuther/ IMI	Ph3 HRSG
13	1700 / 3900 Series	Dresser/ Baker Hughes	Ph4 HRSG

3. Contractor Requirements

- **Certification:** The contractor **must** hold a valid National Board Certificate of Authorization for the use of the "VR" stamp for valve repair.
- **OEM Authorization:** The contractor must be an authorized service provider for both Emerson/Crosby and Baker Hughes safety valves. Preference will be given to **Nijmeh Controls/Baker Hughes**.
- **Personnel:** The contractor shall provide a minimum of two highly experienced personnel for the online pressure setting and testing. The personnel must be certified and capable of troubleshooting and resolving any issues encountered with the safety valves during testing and setting.
- **Equipment:** The contractor will be responsible for mobilizing all necessary specialized tools, testing equipment, and lifting devices to the site.