

**HINDUSTAN PETROLEUM CORPORATION LIMITED  
VISAKH REFINERY**



**MAKE IN INDIA**

Hindustan Petroleum Corporation Limited, Visakh Refinery is inviting "Expression of Interest" from **Indian Manufacturers** to offer equivalent products for its **imported items**. This initiative is a part of the roadmap for successful implementation of "**Make in India**" campaign in Oil and Gas industry with special emphasis on reduction of import content in procurement and also enhance the participation of domestic vendors.

Interested vendors intending to offer equivalent products are requested to go through the list and furnish all the required details/documents about their Products to the following address:

**General Manager-Materials  
HPCL, Visakh Refinery  
Malkapuram  
VISAKHAPATNAM-530011**

The list of items being imported by Visakh Refinery is furnished herein below.

## **LIST OF IMPORTED ITEMS FOR HPCL, VISAKH REFINERY**

### **CHEMICALS & CATALYSTS**

<b>Sl. No</b>	<b>Description of the Item</b>
1	NIU Catalyst
2	Catalyst for DHDS Reactors
3	Hydrogenation catalyst in NLU
4	Catalyst for DHDS SRU
5	Bottoms Cracking Additive FCCU
6	UOP Merox Plus Catalyst for ATF Merox Unit
7	Merox FB Reagent for Merox Unit
8	Catalyst for 1st Isomerization reactor (73-R-02)
9	Dispersant chemical for DHDS
10	Online cleaning of Furnaces
11	ZSM 5 Catalyst Additive
12	CCR Catalyst - R 234
13	FCCU-II Fresh Catalyst
14	FCCU-I Fresh Catalyst
15	CO Combustion promotor
16	DHDS Deolefinic Catalyst (HR 945)
17	DHDS Desulferisation catalyst (HR 538)
18	NHT reactor catalyst
19	NIU offgas dryer adsorbent
20	NIU H2 dryer adsorbent
21	NIU feed dryer adsorbent
22	SHU reactor catalyst
23	HDS reactor catalyst
24	DHDS SRU catalyst
25	DHT reactor catalyst
26	DHDS-HGU reformer catalyst
27	DHDS HGU reformer and prereformer catalyst
28	DHDS HGU PDS & FDS Catalyst
29	DHT HGU PDS & FDS Catalyst
30	Multi Functional Additive
31	Diesel Lubricity Additive
32	Gasol Antioxidant
33	Lubricity additive
34	Merox WS reagent
35	Anti Static additive
36	Enthyl Mercaptan
37	Di-Methyl Disulfide
38	Per Chloro Ethylene

**MECHANICAL ITEMS**

<b>Sl. No</b>	<b>Description of the Item</b>
39	Burner Spares for furnaces of CDU-I, CDU2, CDU3, FCCU-1 & 2, DHDS, MS Block and CO boilers
40	SPM Cam lock Coupling with Blind Flange
41	APH Glass Tube Sheet Assembly for heaters
42	SPM Floating Hoses
43	SPM Hawsers
44	FCCU-II Slide Valve spares
45	Refractory for FCCU-1, FCCU-II
46	FCCU-2 Optimix Feed Distributor outer tip assembly
47	DUROLOK Coupling & Spares
48	SPM Submarine Hoses for Offsite
49	Ceramic ferrules for thermal reactor 65F-101 in DHDS SRU Train I

**ROTARY ITEMS**

<b>Sl. No</b>	<b>Description of the Item</b>	<b>Type</b>
50	Renk make Spares for compressors 74K002A/B & 75KM001A/B (left over items in PR 13-1142)	Babbit lined Bearings
51	FCCU-II Slide Valve spares	Slide Valves
52	Flotation Collars for Marine Breakaway Coupling	
53	Governor for Turbine 11T008B	Governors
54	Spares for Elliott - Ebara/ Coppus/ Turbodyne/ Terry/ Dresser Rand/ Shin Nippon Turbines	Turbines
55	Bearings & carbon rings of various Elliot Ebara make steam turbines	
56	Flow divider spares (008P087A, 008P088A, 008P126A/B, 008P127A/B)	
57	Check valves for frame V Gas Turbines (008GT003-006)	
58	Gas turbine spares (like blade/ nbuckets, shrouds, nozzles, etc) for GTG - 5 & 6 Major inspection	GTGs
59	Flow divider spares (008P087A, 008P088A, 008P126A/B, 008P127A/B)	
60	Woodward Governors for Turbines	Governors
61	Critical service Filters of Hilliard/ Nugent/ Parker/ Pall/ XPS/ Internormen/ Universal Silencer/ Balston/ Hydac/ Schroeder/ Indufil make for lube oil, hydraulic oil or hydrocarbon	Filters
62	Roper make circular and linear flow dividers (used in GTGs) and their spares	Misc. Rotary
63	Spares for steam driven DAWSON & DOWNIE LAMONT, UK make Horizontal Duplex reciprocating Pumps	
64	Auto Cold Filter Plugging Point	
65	Auto Freezing point Analyzer impellers, shafts and other pump internals for imported pumps like IDP, Stork Pompen, Pompe Gabionetta, Friatec, TBJ, Goulds, Naggle, Sundyne, Allwheeler, houttin BV, IMO, Flowserve Corpn, Spaans babcox, Sulzer wiese, Ebara Corpn, David Brown Textron/ Union Pumps, Mirrles Plenty, DMW etc.	Pumps

66	Gearbox spares for critical compressors/ pumps (of Lufkin, Flendor - Graddenstadon, Flendor bacholt, Elliot, Leroy Somer, Nord, BHS Voith etc. make)	GB
67	Centrifugal Compressor spares for extremely critical processes ( of Elliot Ebara, Hitachi, HV Turbo, Atlas Copco, etc.)	Compressors/ Fans
68	Fans & Blower spares for critical services of cofimco, Moores, ABB Flakt, Illinois, Fima, DMW,	Blowers
69	Soot Blower spares for critical services of Rizzy Engg Italy, Cops Vulcon, Clyde Bergmann, Hoffkinson/ Diamond power, etc make	Soot Blowers
70	Gear Coupling spares of Mitsubishi/ Koppers/ SSS make, Diaphragm couplings of EKK make, Flexible membrane couplings of Thomas Flex, Rexnord, Pillar Thomas, make Jaw flex	Couplings

### **ELECTRICAL ITEMS**

<b>Sl. No</b>	<b>Description of the Item</b>
71	Control card (ULF-1) for RGC VFD (90-KM-01) of DHT unit
72	SIMPLEX Diaphragm Metering Pump type MAH3 EX
73	Batteries for single point mooring facility
74	Ignitor Spares, Flexible Ignition Lead, P/N- 354A1513P103
75	Ignitor Spares, spark Plug Insulator, P/N- 287A1699P001
76	Ignitor Spares, Ignition Excitor, P/N- 315A4204P001
77	Ignitor Spares, Flexible Ignition Lead, P/N- 354A1513P102
78	winker light systems including lantern, lantern body, lantern guard, solar batteries, adapters (brackets) for SPM (Single Point Mooring) suitable for fixing on 24 1/2 hose.
79	Spares for UPS and Battery Charger

### **INSTRUMENTATION ITEMS**

<b>Sl. No</b>	<b>Description of the Item</b>
80	Pyrometer for DSRU train 3 Thermal reactor
81	Metso valve spares
82	Bently spares for FCCU and DHDS
83	Hamworthy flame scanners for IBH Boilers
84	Preloaded Cyclemax HMI Hard Drive
85	Mark V Electronic Cards for GTGs
86	Ideal Welder Angle switching valve spares for Train 1 and 2
87	Skin Thermocouples for CDU-II & FCCU-II
88	Flame scanners spares for GTG 1, 2, 3 & 4
89	Installation of skin thermocouples for FCCU-II Reactor dip legs
90	Pneumatic positioners for Metso Valves in CDU-3
91	Vibration Monitoring Systems
92	Antisurge Controllers

## **LABORATORY ITEMS**

<b>Sl. No</b>	<b>Description of the Item</b>	<b>ASTM Standard</b>
93	Auto Distillation Consumables	D 86
94	Auto PM Flash Point	D 93
95	Auto COC Flash	D 92
96	Auto Abel Flash	IP 170
97	Auto Density	D 4052 & D 5002
98	Stabinger Viscometer	D 7042
99	ED XRF	D 4294, IP 336, ISO 20847, IP 352, ISO 13032,
100	WD XRF	D 2622, D 5059
101	Auto Vacuum Distillation	D 1160
102	UV Fluorescence Sulphur Analyzer	D 5453, D 6667
103	Sulphur by Micro Coulometry	D 3120, D 3246
104	Chloride by Micro Coulometry	D 4929
105	Nitrogen by Chemi- luminesces	D 4629
106	Wick bold Sulphur	D 2784
107	Auto Potentiometric Titrators for Bromine No., Mercaptans, Acid No.	D 1159, D 664, UOP 212, D 3227
108	Sulphur by Lamp Method	D1266
109	Sulphur by Bomb Method	D129
110	Smoke Point	D 1322
111	Hydro Carbon Types	D 1319
112	LPG Copper Strip Corrosion	D 1838
113	CCR	D 189
114	RCR	D 524
115	MCRT	D 4530
116	Auto Saybolt ASTM Colour	D 6045
117	Auto Pour Point	D 5950
118	Pour Point	D 97
119	Auto RVP	D 5190
120	Manual RVP	D 323
121	Total Sediments in Fuel Oil	D 4870
122	Auto H2S analyzer	IP 570
123	RON	D 2699
124	MON	D 2700
125	Cetane No.	D 613
126	Auto CFPP	D 6371
127	Total Sediments (Diesel)	D 2274
128	PAH on Diesel	IP 391
129	HFRR	ISO 1256
130	Copper Strip corrosion for Liquid Fuels	D 130

131	Coulometry Karl Fisher	ISO 12937
132	Potentiometric Karl Fisher	ISO 6296
133	Kinematic Viscosity	D 445
134	Burning Quality of Kero	P 5
135	Manual Saybolt Colour	D 156
136	ASTM Colour	D1500
137	Gas Chromatographs	D 2163,
138	Benzene G.C	D 5580
139	Oxygenates G.C	D 4815
140	PIONA analyzer G.C	D 5443, D 6839
141	Detailed Hydrocarbon Analyzer (DHA)	D 6730
142	Existent Gum	D 381
143	Heavy Oil Density (API)	D 1298
144	Sediments in Crude oil	D 473
145	Inductively Coupled Plasma (ICP) OES	IP 501
146	Atomic Absorption Spectrometer(AAS)	D 5184, 5185
147	Simulated Distillation G.C for D86	D 2887
148	True Boiling Point (TBP) Apparatus	D 2892
149	TBP G.C	D 2887
150	Auto aniline Point	D 611
151	Bitumen Viscosity	IS 1206 Part 2 & 3
152	Bitumen Ductility	D 113
153	Bitumen Penetration	D 5
154	Softening Point	D 2042
155	RTFOT	D 2872
156	Cat Carbon, Auto	
157	LPG Oily Residue	ISO 13757
158	Non Volatile matter in Naphtha	P 64
159	H <sub>2</sub> S in LPG	D 2420
160	ATF Freezing Point, manual	D 2386
161	ATF Freezing Point, Auto	D 7153 & 7154
162	Auto 'P' Value	D 7060
163	Naphthalene content	D 1842
164	Mercury in Naphtha & crude	UOP 981
165	Ash content	D 482
166	Crude S & W	D 4007
167	Micro Distillation	D 7345
168	Diesel High Temperature Stability	D 6468
169	FBT	D 2068
170	Silver Strip corrosion	IP 227
171	BOCLE	D 5001
172	JFTOT	D 3241

173	Micro Separometer	D 3948
174	Particle count, ATF	IP 564/565
175	Catalyst Particle Size Distribution	D 4464
176	Crude salt content, extraction	IP 77
177	Crude Salt content, electrometric	D 3230
178	ATF Viscosity @ -20 deg.C	D 445
179	Acidity	IP 1 & 182
180	LPD Density Lucite Jar	D 1657
181	ATF Electrical conductivity	D 2624
182	Trace Oxygenates by G.C	
183	LPG & Naphtha Sulphur compounds by G.C	
184	Refinery Gas Analyzer for the analysis of fixed & permanent gases (by G.C)	
185	Micro COD	
186	Flame proof, Refrigerators to store Petroleum products	
187	Induction Apparatus	D 525
188	Ion Chromatograph for water analysis	
189	Ice Making Machine	
190	Flame Proof Cabinets for solvents storage	
191	Microprocessor based Balances 0.01mg	
192	Auto Oil content Analyzer	