IMPORTANT NOTE

BID DOCUMENT HAS BEEN DISPLAYED BELOW TO UNDERSTAND THE REQUIREMENT ONLY. PARTIES INTERESTED TO PARTICIPATE AGAINST THIS TENDER SHALL HAVE TO PURCHASE THE TENDER DOCUMENTS FROM ANY OF OIL'S DESIGNATED OFFICES MENTIONED IN THE TENDER NOTIFICATION GIVEN BELOW. PROOF OF PURCHASE OF TENDER DOCUMENT MUST BE SUBMITTED ALONGWITH THE OFFER, FAILING WHICH OFFERS WILL BE TREATED AS UNSOLICITED.

OIL INDIA LIMITED
(A Govt. of India Enterprise)
P.O. Duliajan-786602, Assam
E-mail:material@oilindia.in, **Fax No.**91-374-2800533

OIL INDIA LIMITED invites sealed tenders for the following:

Tender No.	B. C. Date	Material Description
DID6583P10/NP	04.03.2010	Design, engineering & fabrication, supply, installation and commissioning of pneumatic controls. = 16 Nos.

2.0 Bid documents (Non transferable) can be purchased from 01.02.2010 till one day prior to the respective B.C. Dates on payment of tender fee of Rs.1,000.00 (excepting for PSUs and SSI units registered for the item) each through Crossed Demand Draft in favour of M/s. Oil India Limited payable at the place of purchase of tender document from

a. Head - Materials, Oil India Limited, P.O. Duliajan, Assam -786602
b. Head -Calcutta Branch, Oil India Limited, 4,India Exchange Place, Kolkata - 700001
c. Senior Adviser(Contract & Purchase), Oil India Limited, Plot No. 19, Sector- 16 A, NOIDA-201301
d. Addl. Chief Materials Manager (Pipeline), Oil India Limited,PO: Udayan Vihar, Guwahati - 781171.

3.0 Detailed tender document will be available in OIL's website
www.oil-india.com

4.0 To be eligible for issue of tender documents, the applicant must meet the following qualifying criteria (documentary evidence to be provided) :

i. Successful execution of a single order of vlaue not less than the amount shown below for supply of similar items during last five years:

Tender No.	Single Order Value in Lakhs (Rs.)
DID6583P10/NP	22.00

ii. Annual turnover of the firm in any of the last three financial years or current financial year should be more than the amount as below :

Tender No.	Annual Turnover in Lakhs (Rs.)
DID6583P10/NP	44.00

OIL INDIA LIMITED
(A Govt. of India Enterprise)
P.O. Duliajan-786602, Assam
E-mail:material@oilindia.in, **Fax No.**91-374-2800533

Tender No. & Date : DID6583P10/NP 19.01.2010

Tender Fee : INR 1,000.00
Bid Security Amount : INR 110,000.00

Bidding Type : Single Bid (Composite Bid)

Bid Closing On : 04.03.2010 at 13:00 hrs. (IST)
Bid Opening On : 04.03.2010 at 13:00 hrs. (IST)

Performance Guarantee : Applicable

OIL INDIA LIMITED invites Press tenders for items detailed below:

Item No./ Mat. Code	Material Description	Quantity	UOM
10 0C000537	Design, engineering & fabrication, supply, installation and commissioning of pneumatic controls for 40 HP rig air compressors complete with motor starter panels for compressor motor and after cooler motor in the utility huts of AC-SCR rigs at OIL's rig sites. **(1) Specification, Note and BRC Clauses are given in ANNEXURE-A.** **(2) Drawing : 3 Nos. Enclosed.**	16	NO
	installation & commissioning		
20	INSTALLATION & COMMISSIONING	1	AU

Special Notes : (1) **VALIDITY : Your offer must be valid for 120 days from the date of bid opening. Offer with inadequate validity will be rejected.**

(2) In the event of receipt of only a single offer against the tender within B.C. date, OIL reserves the right to extend the B.C. date as deemed fit by the Company. During the extended period, the bidders who have already submitted the bids on or before the original B.C. date, shall not be permitted to revise their quotation.

(3) In the event you authorize your dealer/stockist/channel partner to quote on your behalf, the dealer/stockist/channel partner while submitting bid should mention on the body of the envelope that they are submitting bid on your behalf. In the event the dealer/stockist/channel partner do not mention the name of their OEM/principal on the body of the envelope, the offer may be treated as unsolicited offer and may not be considered for evaluation. The dealer/stockist/channel partner should take note of above while submitting bid on behalf of their OEM/principal.

(4) Bidder has to confirm that the installation and commissioning job will be done by them, failing which offer is liable for rejection. Bid will be evaluated considering the installation and commissioning charges.

Tender No. & Date : DID6583P10/NP 19.01.2010

(5) Bidders located within 100KM radius from Duliajan must quote on FOR Duliajan basis with payment term 100% after receipt and acceptance. However OIL may consider payment for such supply upto 90% against despatch document submitted directly or through bank and balance 10% after receipt and acceptance of materials. This clause shall nullify any other clause included elsewhere of this tender if it contradict above clause.

(6) Any sum of money due and payable to the contractor (including Security Deposit refundable to them) under this or any other contract may be appropriated by Oil India Limited and set-off against any claim of Oil India Limited (or such other person or persons contracting through Oil India Limited) for payment of a sum of money arising out of this contract or under any other contract made by the contractor with Oil India Limited (or such other person or persons contracting through Oil India Limited).

(7) To evaluate the inter-se ranking of the offers, Assam Entry Tax on purchase value will be loaded as per prevailing Government of Assam Guidelines as applicable on bid closing date. Bidders may check this with the appropriate authority while submitting their bids.

ANNEXURE-A

TENDER NO. DID6583P10 DATED 19/01/2010

Design, engineering & fabrication, supply, installation and commissioning of pneumatic controls for 40 HP rig air compressors complete with motor starter panels for compressor motor and after cooler motor in the utility huts of AC-SCR rigs at OIL's rig sites.

A. DESCRIPTION OF ITEM:

General:

i) The system will control, monitor and sequence the operation of the air compressor and after cooler motors and protect the motors/ compressor.
ii) The pneumatic controller shall maintain the net pressure between set limits by automatically loading and unloading the compressor. The controller shall stop / unload the compressor when the pressure in the tank rises to the set pressure and restart/ load it automatically when the net pressure in the tank decreases below the set point.
iii) Compressor motor will either be running continuously, loaded and unloaded by the controller, or started/ stopped depending upon the selection (Continuous Running/ Start-Stop) of control.
iv) After-cooler motors will be supplied from a separate panel, with independent starting/stopping or controlled from the compressor motor control panel.

Indicative single line schematics have been included as (B) "Annexure-Drawings". Bidders may design control schemes based on these or may offer their own design.

1. Scope of Supply:

i) Supply of sheet steel enclosed Compressor Starter Panels (total 16 nos.) equipped with the following:

a) 100 Amps Three Phase 36 kA breaking capacity MCCB with ELCB as Incomer
b) Accessories like transformer, ammeter, fuses, selector switches, push buttons etc.
c) LED Indication lamps with motor "RUNNING", "OFF" and "OVERLOAD" indication for motor and "COMPRESSOR LOADING" indication when the compressor is in loading condition
d) Direct on Line Starter for 30 KW/40 HP Motor equipped with TP Power Contactors, pilot relays, Bimetal Thermal Overload Relay, timer, control fuses/ links and other standard accessories as required.

The complete panel will be pre-wired and pre-tested with the pneumatic panel.

ii) Supply of sheet steel enclosed Compressor Pneumatic Panels (total 16 nos.) equipped with the following:

a) Pneumatic components: 2 Nos. each of Pressure Switch and Solenoid Valves and 4 Nos. of Air Filters (2 as spares) along with ¼" SS associated piping.
b) Terminal block for electrical connection of the pressure switch, solenoid valves and air filters.
c) Various sizes of reducers/ adapters/ unions/ tees etc. that may be required for connecting the existing air lines to the pneumatic panels and air compressors.
The pneumatic components/ panel will work in conjunction with the compressor starter.

iii) Supply of sheet steel enclosed After cooler motor Starter Panels (total 16 nos.) equipped with the following:

a) 100 Amps, 15 kA breaking capacity Three Phase MCCB and RCCB as Incomer

b) Direct on Line Starter for 0.5 kW Motor equipped with standard accessories like contactor, overload relay, control fuses/ links
c) LED Indication lamps with motor "RUNNING", "OFF" and "OVERLOAD" indication

The complete panel will be pre-wired and pre-tested.

iv) The work shall also include supply of metal clad sockets for panels and plugs for incomer cables from ACPCR and suitable glands for motors for both starter panel end and motor end.

Supply of EPR insulated, CSP sheathed multi-stranded copper cable of suitable size from the ACPCR MCC panel to compressor and after cooler starter panels, motor power cables and interconnection cable between compressor and after cooler panels will be under OIL scope.

2. Scope of Installation and Commissioning:

Supplier shall install and commission (unitize with the existing air compressor units) the items as mentioned in the "Scope of Supply" in the utility huts of M/s OIL's AC-SCR rigs from S-1 to S-8, total 16 sets, 2 sets in each rig. [Items (i) to (iii) from the above "Scope of Supply", one from each, taken together, constitute one set].
Supplier shall manufacture/ fabricate and supply the items only after getting due approval of drawings by M/s OIL. [Refer 5: Submission of Drawings].

3. Items Specifications:

Compressor Starter Panel: (Each Panel)

Sl. No.	Item	Specifications	Make / Model	Quantity
1	MCCB (incomer) with RCBO	100 A MCCB with thermal and magnetic trip unit, built-in single phasing preventor, 3 P, 415 V, 36 KA breaking capacity. An **earth leakage trip unit (RCBO)** with test/ reset push button with sensitivity of 300 mA shall be provided with the MCCB. The item shall conform to IS 12640 (2001) - Part 2, IEC 61009-1. *MCCB and E/L device shall be mounted on a separate plate for ease of future modification.*	Merlin Gerin (Group Schneider) [Similar to MG model no. NS100N3P29990] and E/L device 16907	01
2	Contactor for DOL Starter	3 Pole 80 A main 3 phase, 50 Hz contactor with 110VAC coil & 4 NO+2 NC contacts for DOL contactor of air compressor motor starter. Contactor shall conform to IEC 947-4 and IS: 13947-4	Telemecanique model no. LC1D80F5	01
3	Overload Relay	Thermal Overload Relay, single phasing protection in-built, range: 37-50 A	Telemecanique model no. LRD3357	01
4	Pilot relay	Control relay, 110 VAC with at least 2 NC contacts with socket and holding clamp	Telemecanique model no. CA2KN22F7	02
5	Ammeter	MI Ammeter, 0-300 A, 72 X 72 mm, 90 deg scale, CT operated (pass 2 turns), 0-75/300A	Automatic Electric/ IMP/ Crompton	01
6	Current Transformer	Current Transformer, resin cast C. T. Ratio-100/5 A, Burden 15 VA, Accuracy Class 1 (for ammeter)	A.E. Ltd /Kappa	01
7	Control Transformer	415/ 110-0-110 V, 100 VA (normal)/ 500 VA (inrush) transformer, resin cast	A.E. Ltd /Kappa	01

8	Indication Lamps	"ON" lamp LED type – Red, with LVGP Size 22.5mm, 110 VAC	Binay/ Microtech Telemecanique	01
		"OFF" lamp LED type – Green, with LVGP Size 22.5mm, 110 VAC	Binay/ Microtech Telemecanique	01
		"OVERLOAD" lamp LED type – Yellow, with LVGP, Size 22.5mm, 110 VAC	Binay/ Microtech Telemecanique	01
		"COMPRESSOR LOADING" lamp LED type – Blue, with LVGP, Size 22.5mm, 110 VAC	Binay/ Microtech Telemecanique	01
9	Control fuse with base	2 /4 A, 415 V & 240 VAC, NS type	English Electric, GEC	02/02
10	Timer	Pneumatic timer, 0-30 seconds, 110 VAC	Telemecanique LADS2	01
11	Start-stop/ Cont. Run Sel. switch	Four position (OFF-CR-OFF-SS) selector switch for selecting continuous running or start-stop running of the compressor	Kaycee/ Raycom	01
12	Start/ stop pushbuttons	For start, red pushbutton For stop, green pushbutton	Kaycee/ Raycom	01/01
13	Terminal Block	For incoming, outgoing and control cable terminations	Tosha, of suitable sizes	-

After Cooler Starter Panel: (Each Panel)

Sl. No.	Item	Specifications	Make/ Model	Quantity
1	MCCB (Incomer)	100 A MCCB with thermal and magnetic trip unit, 3 P, 415 V, 15 KA breaking capacity. The item shall conform to IS 12640 (2001)-Part 2, IEC 61009-1. *MCCB shall be mounted on a separate plate for ease of future modification.*	Merlin Gerin (Group-Schneider) Similar to EasyPact Model EZC100N3100	01
2	RCCB	25 A, 3 pole, 300 mA sensitivity, 3 phase, 50 Hz Residual current circuit breaker, with test/reset push button *RCCB shall be mounted on a separate plate/ DIN channel for ease of future modification.*	Merlin Gerin (Group-Schneider) Similar to Model no. 16252	01
3	Contactor for DOL Starter	3 Pole 9 A, 50 Hz contactor with 110 VAC coil and 2 NO + 2 NC auxiliary contacts for DOL starter. Contactor shall conform to IEC 947-4 and IS: 13947-4	Telemecanique model no. LC1-K0910F7+ LA1-KN22	01
4	Overload Relay	Thermal Overload Relay, 0.80-1.20 A	Telemecanique model no. LR2-K0306	01
5	Control fuse with base	2 A, 415 & 240 VAC, NS type	English Electric/ GEC/ Alsthom	02/02
6	Control Transformer	415/ 110-0-110 V, 30 VA (normal)/ 70 VA (inrush) transformer, resin cast	A.E. Ltd /Kappa	01
7	Indication Lamps	"ON" lamp LED type – Red, with LVGP, Size 22.5mm, 110 VAC	Binay/ Microtech Telemecanique	01
		"OFF" lamp LED type – Green, with LVGP, Size 22.5mm, 110 VAC	Binay/ Microtech Telemecanique	01
		"OVERLOAD" lamp LED type – Yellow, with LVGP, Size 22.5mm, 110 VAC	Binay/ Microtech Telemecanique	01
8	Start/ stop pushbuttons	For start, red pushbutton For stop, green pushbutton	Kaycee/ Raycom	01/01
9	Terminal Block	For incoming, outgoing and control cable terminations	Tosha, of suitable sizes	-

Pneumatic panels: (Each panel)

Sl. No.	Item	Specifications	Make / Model	Quantity
1	Pressure switch	Pressure switch type: PS Pressure range: 7-15 atmosphere (100-220 psi) Rating: 9 A, 500 VAC (max.) Temperature: 100 degree Centigrade Pipe connection: ¼", Enclosure: IP 44 Range regulation should be available	Danfoss	02 (01 will be spare)
2	Air filter **	Filter element: 50 Micron Bowl: Metallic with sight glass, Drain: Manual Maximum air pressure: 250 psig (17.2 bar) at 79 deg. C	Shavo Norgren Model F17 (or equivalent reputed make)	04 (02 will be spare)
3	Solenoid valve	Direct acting type Pressure range: 0-250 psig Operating voltage: 110 VAC Inlet port: 01, Outlet port: 01	Seits Rotex, Mumbai	02 (01 will be spare)
4	Terminal Block	For control cable terminations	Tosha, of suitable sizes	-
5	¼" line valves	For controlling of air flow to solenoid valves and pressure switches	Reputed make	04
6	Unions, Tees, reducers, adapters	For connection of pneumatic lines (inside panel, panel body, on compressor head, air filters etc.)	Reputed make	As reqd.

3/8" (or ½") air supply lines to pneumatic panels are tapped from the tank. These are to be terminated at the pneumatic panel for supplying of control air to the pressure switch and solenoid valve through a tandem air filter ** (2 nos.) arrangement. Suitable reducer/adapter will be fitted on the panel body. The connecting lines (1/4" SS seamless tubes) to solenoid valves and pressure switches shall be tapped from these adapters through "tees", unions, valves etc. Similarly outgoing controlling air lines (¼") from the solenoid valves shall be terminated at the panel through an adapter and then tapped to compressor through ¾" or 1/2" lines. (Refer to Indicative drawing of Pneumatic panel).

Specifications for wires: (Panel internal wiring)

2.5 mm2 PVC insulated, unsheathed, FIRE RETARDANT, single core copper cable of 1100 V grade, number/ nominal diameter of strands 36/0.3 mm. Conductor strands to be made from 99.9% bright, high conductivity electrolytic grade virgin copper. Cable to be approved by BIS-694, Fire Insurance Authority & Tariff Advisory Committee. Colour of insulation: Red, make: FINOLEX.

Specification of Plugs/ sockets and glands:

Sockets in compressor and after cooler starter panels, for insertion of matching plugs fitted on the incomer cables from ACPCR. Plugs & sockets-make: BCH, Type DS6A7A1 & DS6B7A1 (63A) for compressor and Type DS1A7A1 & DS1B7A1 (16A) for after-cooler starter.
Suitable sized glands for motor and interconnection cables both at starter panel end and motor end.

4. Panel Specifications:

The compressor, after-cooler starter and pneumatic control panels shall be fabricated from sheet steel, dust and vermin- proof, suitable for indoor wall mountable installation, industrial type conforming to IP-54. It should be fabricated from 14 SWG CRCA sheet steel and suitable size rigid M.S. angle iron / M.S. channel frame work to have sufficient strength. Panel door should be of single leaf design with heavy duty hinges and lockable. A neoprene gasket is to be provided around the periphery of panel

door to make it dust, oil mist/ vapour and vermin-proof. Panels should be fitted with necessary vibration dampeners as air compressor sheds/ houses are prone to severe vibration. An earth bar of 50 mm x 6 mm of G.I. strap is to be provided on the backside of the control panel for earth connection. Danger plates are to be provided on the front of motor control panels. Detachable gland plate is to be provided for glanding of incoming and outgoing cables in motor control panels. Suitable metallic cable protectors are to be provided on the motor cable runs on the floor of the utility house.

The existing air compressor/ utility house has limited space for placement of these panels. Keeping this in view, the overall dimensions of the panels will be limited to approximately:

a) For compressor starter panels:
1000 mm (Height) x 500 mm (Width) x 200 mm (Depth).
b) For after cooler starter panels:
500 mm (Height) x 300 mm (Width) x 200 mm (Depth).
c) For pneumatic panels:
300 mm (Height) x 300 mm (Width) x 200 mm (Depth).

The total height of the control panels from the ground level should not be more than 1.8 metres.

4.01 Panel Painting:

Panels should be thoroughly cleaned before applying two coats of rust preventive paints. This shall be followed by three coats of paint light grey Shade No. 631 as per IS: 5, thickness - 50 Microns.

4.02 Panel Design:

Panels shall be designed incorporating the following points.

a) All control wiring inside the panels is to be done with single core, 2.5 mm2 flame retardant flexible copper PVC insulated and PVC sheathed wire.
b) All control and power connections are to be terminated with suitably rated tinned copper cable terminals (pin or ring type, as required). CT connections must be done with ring type terminals.
c) All control wires are to be terminated to a terminal strip/ block for ease of access, maintenance and modification.
d) All wires are to be fitted with coloured and numbered ferrules for ease of identification.
e) Cable glands of suitable sizes are to be provided at cable entry points of the panels except incoming cables. Outgoing cables to motors and pneumatic panels shall be through bottom of the panel.
f) Incoming power supply to the compressor and after-cooler starter panels shall be through plugs and sockets (top entry), sockets fitted on the panels and matching plugs on incoming cables from AC PCR. Socket shall be fitted on detachable plate for future modification.
g) The indicating meters are to be mounted on the front side of the panels and shall be of flush type.
h) Layout of the components inside the panel should be systematic and arranged in such a manner that sufficient space inside the panel is available for maintenance.
i) Pneumatic lines shall be ¼" stainless steel, seamless tubes inside the pneumatic panel. One pressure switch and one solenoid valve shall be wired up with the compressor starter panel (connected through TB), and another set of one pressure switch and one solenoid valve (as a stand-by set) shall be mounted near the wired up pressure switch and solenoid (also connected through TB), so that in case of failure of the running pressure switch and/ or solenoid, the stand-by items can be immediately connected and the compressor can be put back on service.
j) 2 Nos. of separate earthing points are to be provided on the panels.
k) Eye hook (s) shall be provided for lifting of panel.
l) **Any items/ points not indicated/included in the specifications but necessary for Installation and Commissioning and efficient control, operation and protection of the compressors, compressor and after cooler motors/ panels shall have to be stated/supplied by the bidder.**

5. Submission of Drawings:

Power and control wiring diagram of the control panels should be similar to the attached indicative power and control schematics of electrical air compressors and after coolers.

a) Bidder shall submit the following information along with the offer failing which offer is liable for rejection:
Dimensional/ GA Drawing (indicative)
Schematic Drawing (indicative)
Component layout (indicative)
Wiring layout (indicative)
Technical datasheet/ Catalogues of all the major components like MCCB, RCBO/RCCB, pressure switches, solenoids, contactors, overload relays etc.

b) In case of the successful bidder, OIL shall study the drawings and incorporate modifications/ corrections if required. The bidder shall incorporate the modifications in the drawings and submit the same to OIL for approval. Only after getting due approval of drawings from OIL, the bidder/ manufacturer shall proceed for manufacturing of the panels.
After successful commissioning, supplier/ bidder shall submit electrical drawings (laminated) of the panels which shall be corrected and final drawings after installation and commissioning, 2 (two) sets loose and 1 (one) set fixed on the panel for each panel.

c) Spare parts list with price is to be submitted for OIL's scrutiny along with the quotation.

6. Parts List & Instruction Manual:

Successful bidder shall supply 10 (ten) sets each of recommended spare parts list for two years normal operation and operator's instruction manual covering all the items along with panels.

7. Existing motor specifications:

30 kW motors: 415 V, 3 ph, 50 Hz, full load current: 52 Amps
Cable size: 4 X 16 mm2
0.5 kW motors: 415 V, 3 ph, 50 Hz, full load current: 0.87 Amps
Cable size: 4 X 6 mm2
Power to the compressor and after cooler motor starter panels are fed from AC power control room feeder panels, at 415 V, 50 Hz, 3 phase (without neutral).

B. List of Indicative Drawings attached (Annexure Drawings):

1) Compressor control panel
2) After cooler control panel
3) Pneumatic control panel

C. General Notes:

i) The equipment (starter panels including the pneumatics) shall be supplied, installed and commissioned at OIL's AC-SCR rigs from S-1 to S-8 at respective locations (rig sites) within a radius of 100 KM from Duliajan.
ii) Cost of material supply and cost of installation and commissioning will be quoted separately.
iii) Design schemes, drawings of the panels and catalogues of items will be submitted along with the quotation. Improper/incomplete design as well as offers without design drawings will be summarily rejected.
iv) Party should submit credentials/certificates of having supplied and installed similar items to Govt./ Semi Govt. PSU along with the quotation, if any.

v) For installation and commissioning of the panels, supplier shall have valid Electrical Contractor's license issued/ endorsed by Assam State Licensing Board for electrical jobs.
vi) All installation and commissioning works shall be carried out by workmen having valid Electrical Workman permit issued/ endorsed by Assam State Licensing Board for electrical jobs and shall be supervised by a person holding Supervisor's Competency certificate issued/ endorsed by the same body. Supervisory license holders shall have Parts 1, 2, 3 & 4 as the minimum level of qualification, in accordance with the licensing policy of the Government of Assam.
vii) After the job is completed, the supplier, as per the requirement of Indian Electricity Rules shall inspect the same and any defects noticed therein shall be rectified at supplier's cost.
viii) Copies of licenses and permits as mentioned in points (vii) and (viii) above shall be submitted along with the quotations, or offers will not be considered for evaluation.
ix) Warranty / guarantee of the items as well as complete panels will be for 18 months from the date of successful commissioning at site. Guaranty Certificate shall be submitted at the time of delivery of control panel.
x) Board and lodging of commissioning personnel and transportation of man and materials will be in the scope of supplier.
xi) Payment shall be made as under:
a) 70% of the total material cost on supply of materials
b) 100% of the installation and commissioning charge on full commissioning of all the panels at site, as described in point No. 1 above, at OIL's Rig sites
c) Balance 30% of the material cost on commissioning and handing over of panels at site and submission of corrected and final drawings as per NIT Para 5, Submission of Drawings.

xii) Bidders or their representatives may visit our well site at their discretion for inspection of utility house before submission of offer and carry out feasibility study of the job, at their own cost.
xiii) Technical checklist attached with the NIT shall be properly filled up by the bidder and submitted with the bid.

D. BRC CLAUSES:

The offers must conform to the specifications and terms and conditions given in the demand. Bids shall be rejected in case the items offered do not conform to the required parameters stipulated in the technical specifications and to the respective standards wherever stipulated.
Notwithstanding the general conformity of the bids to the stipulated specifications and terms and conditions, **the offer/ offers will be considered as non-responsive and be summarily rejected, if the offers are found**:

i) Not offering complete scope of works, e.g., only offering supply of materials, without mentioning installation and commissioning of panels
ii) Not enclosing copies of valid Electrical Contractor's License, Supervisor's Certificate of Competency and Electrical Workman's Permit issued/ endorsed by Assam State Licensing Board for concerned persons
iii) Not meeting/ offering warranty/ guarantee of 18 (eighteen) months from the date of commissioning
iv) Not enclosing the following documents [as per Para 5.0, Submission of Drawings]:
- Dimensional/ GA Drawing (indicative)
- Schematic Drawing (indicative)
- Component layout (indicative)
- Wiring layout (indicative)
- Technical datasheet/ Catalogues of all the major components like MCCB, RCBO/RCCB, pressure switches, solenoids, contactors, overload relays etc.

E. Technical Checklist (to be filled in by the bidder and submitted with the bid)

1	WHETHER bidder confirms to install and commission the items (panels) at OIL's AC-SCR rigs from S-1 to S-8 at respective locations (rig sites) within a radius of 100 KM from Duliajan?	YES/NO
2	WHETHER bidder has submitted detailed technical specifications, Catalogues of components and Electrical schematic/GA/ layout/ wiring drawings etc. of all the panels with the quotation (as per NIT Note # 3 Detailed description, Para 5.0, Submission of Drawings)?	YES/NO
3	WHETHER attested copies of valid Electrical Contractor's licenses are submitted along with the quotation (as per Point # **ii** of BRC)?	YES/NO
4	WHETHER attested copies of valid Workman Permits and Supervisor's Competency certificates are submitted along with the quotation for work persons (as per Point # **ii** of BRC)?	YES/NO
5	WHETHER bidder agrees to inspect the panels after installation and commissioning and rectify any defects noticed therein free of cost to OIL?	YES/NO
6	WHETHER bidder guarantees/ warranties the panels for 18 months from the date of successful commissioning at site and agrees to repair/ replace the defective items/ panels free of cost including to and fro transportation?	YES/NO
7	WHETHER bidder has submitted credentials/certificates, if any, of having supplied similar items to Govt./ Semi Govt. PSU along with the quotation?	YES/NO
8	WHETHER bidder has submitted list of a**ny other items/ points not indicated /included in the specifications but deemed necessary for Installation/Commissioning and efficient control, operation and protection of the compressors, compressor and after cooler motors/ panels?**	YES/NO

Checked and Confirmed

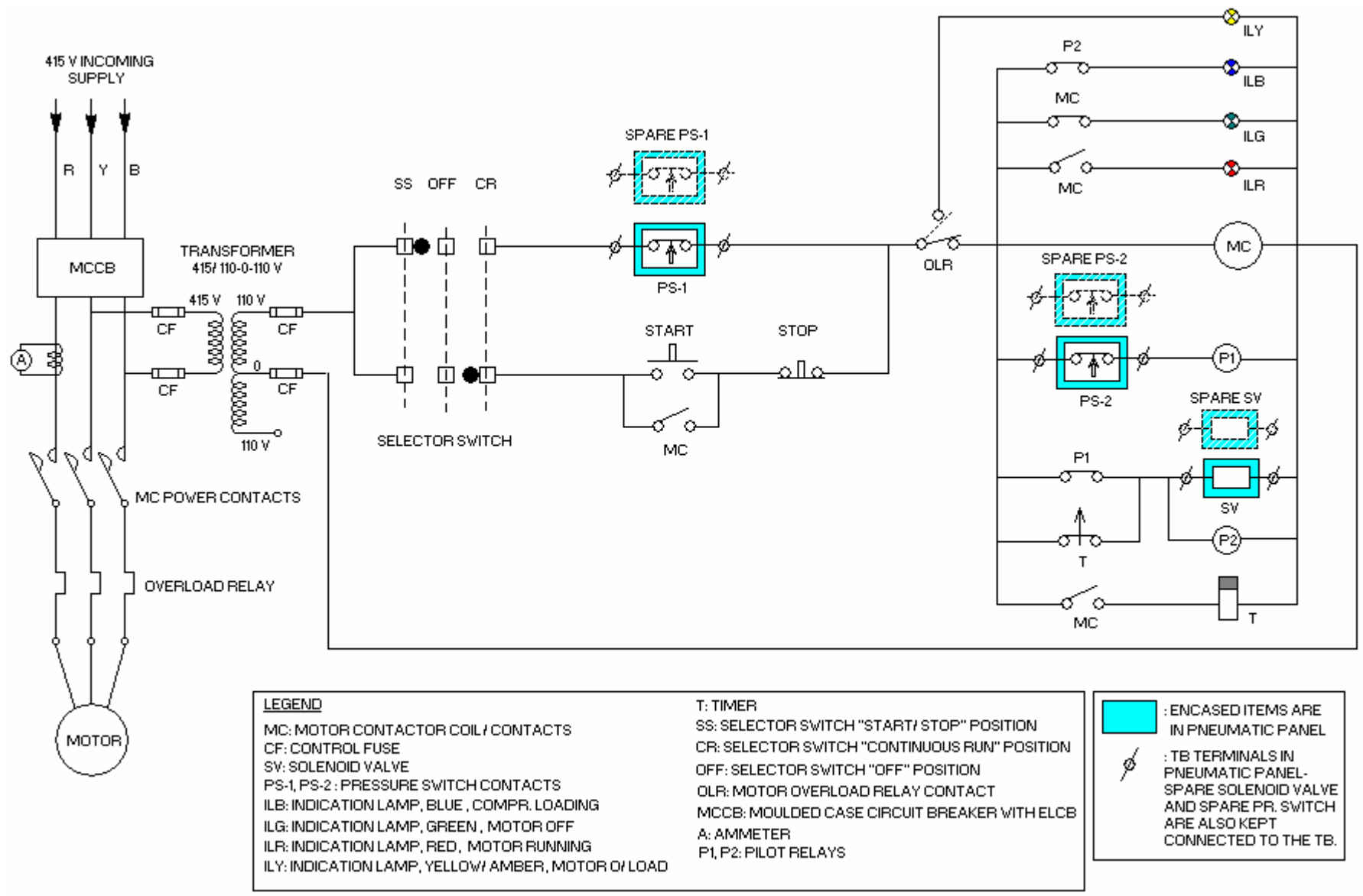
_____

(Signature)

Seal

****

ANNEXURE II



AIR COMPRESSOR CONTROL SCHEMATIC: DRAWING SHOWS ALL COMPONENTS IN DE-ENERGIZED STATE AND NO/ LOW AIR PRESSURE IN THE SYSTEM

CONDITIONS:

MOTOR SHOULD START ON NO LOAD, i.e., WITHOUT COMPRESSOR LOADING, IRRESPECTIVE OF NO PRESSURE/ LOW PRESSURE/ HIGH PRESSURE IN THE TANK

SV (SOLENOID VALVE)	:	IF ENERGIZED, COMPRESSOR SHOULD BE UNLOADING; IF DEENERGIZED, COMPRESSOR SHOULD LOAD.
PS-1, PS-2 (PRESSURE SWITCH CONTACTS)	:	CLOSES WHEN PRESSURE IS BELOW SETPOINT, OPENS WHEN PRESSURE IS ABOVE SETPOINT.
T (TIMER)	:	5 SECONDS ON DELAY TIMER, i.e., TIMER CONTACT OPENS 5 SECONDS (ADJUSTABLE) AFTER TIMER IS ON.

DESCRIPTION OF OPERATION

OPTION 1:

SELECTOR SWITCH (START/ STOP – CONTINUOUS RUN) SET TO **START/ STOP (SS)** POSITION

Assume no air or low air pressure in the tank.

PS-1 & PS-2 are already closed. Motor contactor MC gets energized directly through PS-1. Pilot relay P1 gets energized through pressure switch contact PS-2. P1 contact in the solenoid valve circuit opens. MC contact in the timer circuit closes and energizes the timer. Solenoid valve SV gets energized through the timer contact T. Motor starts. However, since SV is energized, motor starts on unloading condition of the compressor, even when the pressure in the tank is low. After 5 seconds, timer contact T opens and de-energizes the SV (P1 contact is already open). Motor now starts loading.

Pressure builds up to the set point. PS-1 then opens, cutting off supply to the motor contactor. Motor stops. All contacts return to their original state. When pressure drops below set point, PS-1 (and PS-2) closes and starts the cycle all over again.

When pressure is above the set point, PS-1 and PS-2 are open. The motor cannot start at this state.

OPTION 2:

SELECTOR SWITCH (START/ STOP – CONTINUOUS RUN) SET TO **CONTINUOUS RUN (CR)** POSITION

Assume no air or low air pressure in the tank.

In this option, the motor is to be first started by “start” pushbutton.

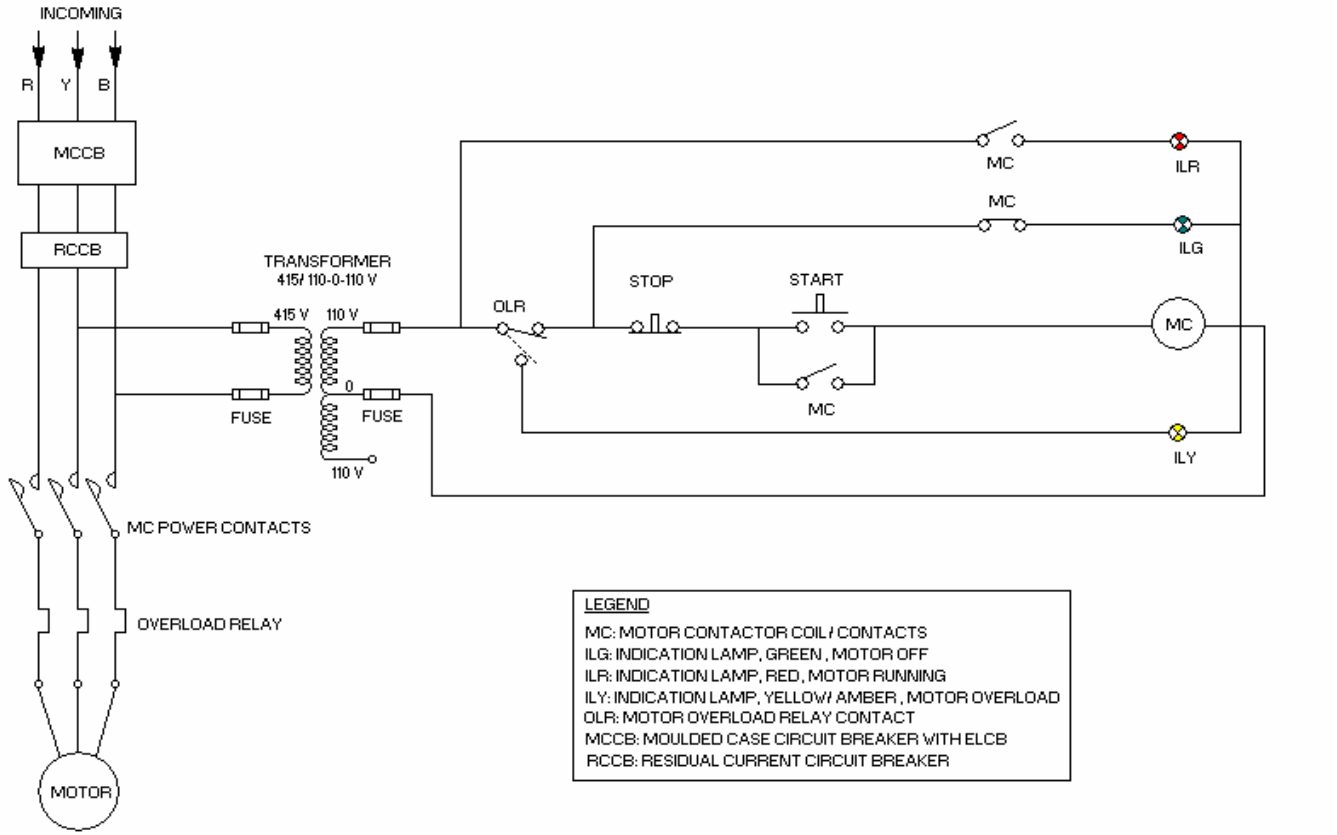
Start PB is pressed. Motor contactor MC gets energized. MC contact across the start push button seals in the MC. Pilot relay P1 gets energized through pressure switch contact PS-2. P1 contact in the solenoid valve circuit opens. MC contact in the timer circuit closes and energizes the timer. Solenoid valve SV gets energized through the timer contact T. Motor starts. However, since SV is energized, motor starts on unloading condition of the compressor,

even when the pressure in the tank is low. After 5 seconds, timer contact T opens and de-energizes the SV (P1 contact is already open). Motor now starts loading.

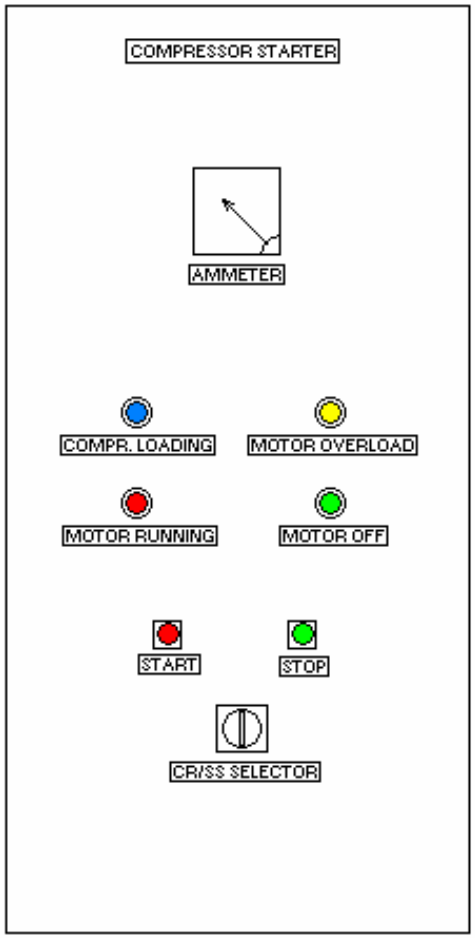
When pressure builds up to the set point, PS-2 opens and de-energizes pilot relay P1. P1 contact in the solenoid valve circuit closes and energizes the solenoid valve. (Timer contact T is already open in the SV circuit). Compressor then starts unloading, while the motor is still running. When pressure falls below the set point, PS-2 closes and energizes P1. P1 contact opens and de-energizes the SV. Compressor then starts loading. The cycle thus repeats through PS-2, P1 and SV. When it is desired to stop the compressor, stop push button is pressed, which de-energizes MC and all contacts return to their original state.

When pressure is above the set point and the motor is started at this point, (PS-2 is open at this state), SV will get energized through P1 and T. Motor will start in unloading. Even after timer contact T opens after 5 seconds, compressor will not start to load until the pressure falls below the set point and PS-2 closes, energizing P1 and the SV is de-energized.

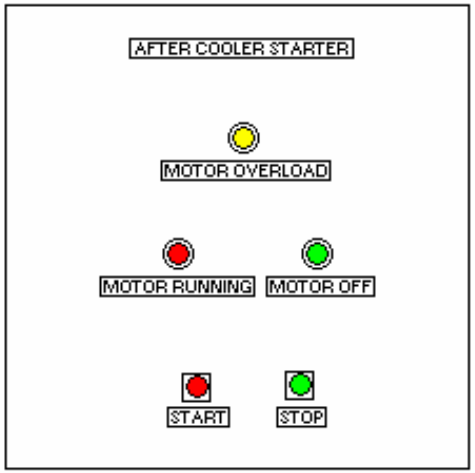
SCHEMATIC OF AFTER COOLER MOTOR STARTER:



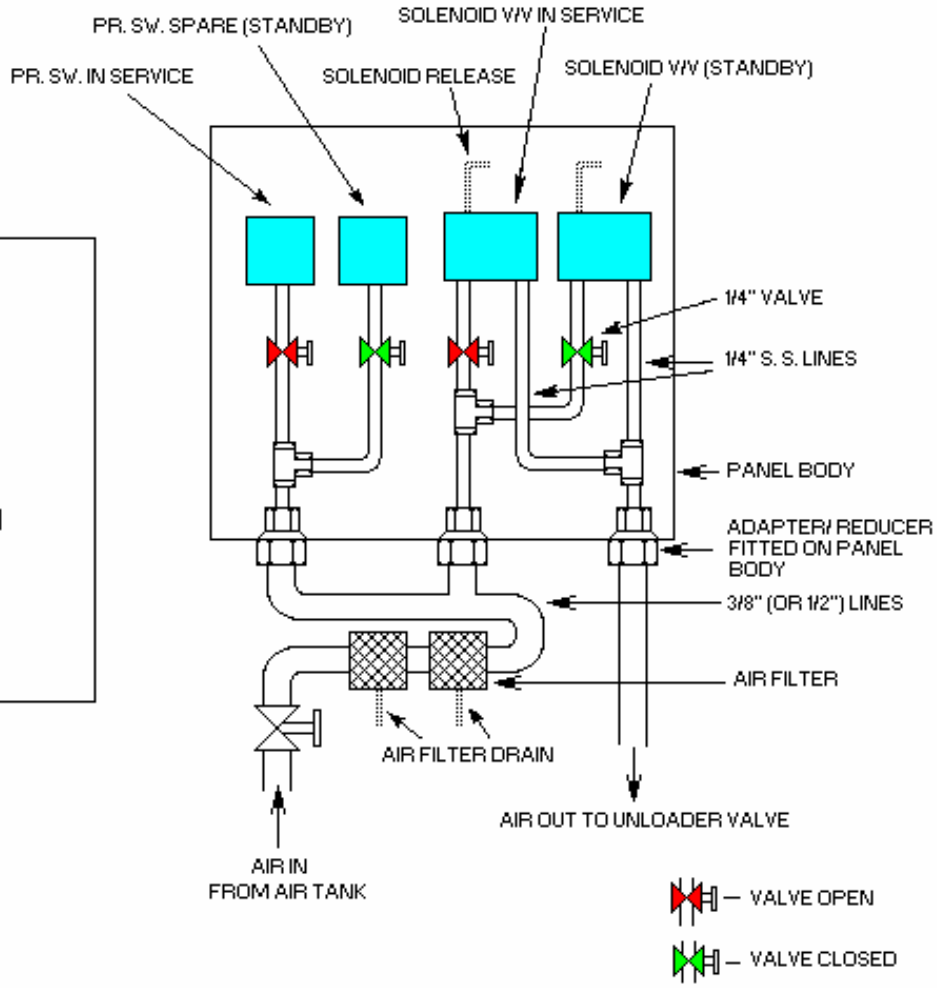
FASCIA OF THE STARTER PANELS



COMPRESSOR STARTER PANEL



AFTER COOLER STARTER PANEL



PNEUMATIC PANEL (INSIDE VIEW)
(ELECTRICAL WIRING NOT SHOWN)