	PROJECT	Standby SRU & Additional Tanks IOCL Paradip Refinery		
	CLIENT	INDIAN OIL CORPORATION LIMITED		
QCP-MACHINERY INSTALLATION	Project No. 080557C001	Document No. 080557C-000-QCP-6850-003	Rev. No. 0	Page 1 of 4

QUALITY CONTROL PLAN

MACHINERY INSTALLATION (CENTRIFUGAL COMPRESSORS)



TYPE OF QUALITY CONTROL REPORT	CERTIFICATION EXTENT
W 12/A	SINGLE REPORT FOR EACH MATERIAL
CR 10, CR 10A	SINGLE REPORT FOR EACH ITEM
CW 58	SINGLE REPORT FOR EACH RELEASED GROUP OF ITEMS

REFERENCE DOCUMENTS:

- 080557C-000-PP-805 Site Coordination & Communication Procedure.
- 080557C-000-PP-807 Material Receiving, Inspection, Handling, Storage & Preservation
- 080557C-000-PP-804 Specification for Positive Material Identification at Construction Site.
- 080557C-000-JSD-2200-001 Job Specification for Hot Insulation of Vessels, Piping and Equipment
- 080557C-000-JSD-2200-002 Job Specification for Cold Insulation of Vessels, Piping and Equipment
- 080557C-000-PP-820 Standard specification for inspection, flushing and testing of piping systems & Equipment
- 080557C-000-JSC-0000-003 Standard specification for Erection of Equipment & Machinery
- DRAWINGS



0	14.11.2019	ISSUED FOR IMPLEMENTATION	TB	PKP/LA	LA	JMC
REV.	DATE	STATUS	WRITTEN BY	CHECKED BY	APPROVED BY	AUTHOR. BY
DOCUMENT REVISIONS						

This document is developed by TECHNIP India Limited and the information it contains is property of Indian Oil Corporation Ltd. It shall not be used for any purpose other than that for which it is supplied.

 		PROJECT	Standby SRU & Additional Tanks IOCL Paradip Refinery		
		CLIENT	INDIAN OIL CORPORATION LIMITED		
QCP-MACHINERY INSTALLATION	Project No. 080557C001	Document No. 080557C-000-QCP-6850-003		Rev. No. 0	Page 2 of 4



LEGENDA

H	=	HOLD (RFI required - Work stop for inspection)
W	=	WITNESS (RFI required)
WC	=	100 % SUPERVISION AND EXAMINATION BY CONTRACTOR.
P	=	PERPARATION
S	=	SURVEILLANCE (No RFI)
R	=	REVIEW OF REPORTS
N.A.	=	NOT APPLICABLE
A	=	AUTHORIZATION / APPROVAL
IFA	=	ISSUED FOR AUTHORIZATION/APPROVAL
INFO	=	FOR INFORMATION
!	=	WARNING (control of document revision status)

 		PROJECT	Standby SRU & Additional Tanks IOCL Paradip Refinery		
		CLIENT	INDIAN OIL CORPORATION LIMITED		
QCP-MACHINERY INSTALLATION		Project No. 080557C001	Document No. 080557C-000-QCP-6850-003	Rev. No. 0	Page 3 of 4
S.No	CHECK AND INSPECTION ITEM	QUALITY CONTROL REPORT	ACTION		NOTES
			CONTRACT.	TECHNIP	
A)	PRELIMINARY ACTIVITIES				
A.1	CONTRACTOR DRAWINGS CHECK REVISION STATUS	N.A.	!	!	
A.2	CONTRACTOR TECHNICAL SPECIFICATIONS AND PROCEDURES	N.A.	P	A	
A.3	VENDOR INSTALLATION MANUAL	N.A.	R	INFO	(1)
A.4	CONTRACTOR METHOD STATEMENT & ENGINEERED LIFTING STUDY (IF REQUIRED)		P	A	(1)
B)	BEFORE INSTALLATION				
B.1	MATERIAL APPROVAL (including grouting material)	W 12A	WC	A	(1) (4)
B.2	MACHINERY ACCESSORIES IDENTIFICATION AND CONSERVATION STATUS	N.A.	WC	S	
B.3	MATERIAL MAINTENANCE CARD				(2)
B.4	MACHINERY FOUNDATIONS CHECK	CR 10	WC	W/R	
C)	CENTRIFUGAL COMPRESSORS INSTALLATION				
C.1	SHIMS INSTALLATION AND PROPER CHIPPING CHECK	CR 10	WC	W/R	
C.2	POSITIONING & PLANT AXES	CR 10	WC	W/R	
C.3	ELEVATION AND LEVELING	CR 10A - CR10	WC	W/R	
C.4	DRIVER INSTALLATION (IF ANY)	CR 10	WC	W/R	
C.5	GROUTING AUTHORIZATION FOR ANCHOR BOLTS	CW 58 - CR 10	WC	A	(3)
C.6	GROUTING EXECUTION				(5)
C.7	ANCHOR BOLTS PRETIGHTENING	CR 10	WC	S	
C.8	PREALIGNMENT AND COUPLING HUB DISTANCE	CR 10A - CR 10	WC	S	
C.9	GROUTING AUTHORIZATION	CW 58 - CR 10	WC	A	(3)
C.10	GROUTING EXECUTION				(5)
C.11	FINAL ANCHOR BOLTS TIGHTENING	CR 10	WC	R/S	
C.12	INSTALLATION OF ACCESSORIES (including instrumentation & electrical equipment if any)	CR 10	WC	S	
C.13	FLANGES PARALLELISM BEFORE PRESSURE TEST	CR 10A - CR10	WC	W/R	
C.14	FINAL ALIGNMENT (FREE & FLANGED) AND FLANGE PARALLELISM AFTER PIPING PRESSURE TEST	CR 10A - CR10	WC	W/R	(6)
C.15	NAMEPLATE CHECK	CR 10	WC	S	
C.16	FINAL DOCUMENTATION REVIEW	CR 10			

This document is developed by TECHNIP India Limited and the information it contains is property of Indian Oil Corporation Ltd. It shall not be used for any purpose other than that for which it is supplied.

CONFIDENTIAL – Not to disclose without Authorization

 	PROJECT	Standby SRU & Additional Tanks IOCL Paradip Refinery		
	CLIENT	INDIAN OIL CORPORATION LIMITED		
QCP-MACHINERY INSTALLATION	Project No. 080557C001	Document No. 080557C-000-QCP-6850-003	Rev. No. 0	Page 4 of 4

NOTES: (1) A COPY OF THE DOCUMENT WILL BE DELIVERED TO COMPANY FOR INFORMATION.

- (2) "MATERIAL MAINTENANCE CARD" (IF ANY) WILL BE DELIVERED BY CONTRACTOR WAREHOUSEMAN TO CONTRACTOR SITE TOGETHER WITH THE RELEVANT MACHINERY.
MACHINERY MAINTENANCE ACTIVITIES (BEFORE AND AFTER INSTALLATION) SHALL BE RECORDED
- (3) GROUTING AUTHORIZATION REPORTS WILL BE ALWAYS AVAILABLE DURING THE CONSTRUCTION BUT NOT INCLUDED IN THE CONSTRUCTION QUALITY DOSSIER.
- (4) MATERIAL APPROVAL WILL BE EXECUTED ONLY FOR MATERIAL SUPPLIED BY CONTRACTOR.
- (5) FORMS, INSPECTIONS AND ATTENDANCES SHALL BE IN ACCORDANCE WITH REFERRED QCP.
- (6) ACTIVITIES TO BE DONE AFTER PRESSURE TEST AND DURING PRECOMMISSIONING REINSTATEMENT FASES.

GENERAL NOTES

- 1 THE ENCLOSED ITP'S ARE INDICATIVE AND SHALL BE FOLLOWED FOR DEVELOPING THEJOB SPECIFIC ITP'S FOR THE WORKS TO BE PERFORMED BY THE CONTRACTOR. THE PROVISIONS INDICATED FOR STAGE WISE INSPECTION BY TECHNIP AND OWNER (FOR SPECIFIC ACTIVITIES) ARE THE MINIMUM AND THE ENGINEER-IN- CHARGE MAY DECIDE TO INCREASE HOLD POINTS/ WITNESS POINTS, WHILE APPROVING THE JOB SPECIFIC ITP'S. ACTIVITIES FOR WHICH ITP'S ARE NOT PROVIDED IN THIS SPECIFICATION. CONTRACTOR TO DEVELOP AND GET THE SAME APPROVED BY TECHNIP/OWNER BEFORE START OF THE WORK. IN GENERAL ROLE OF TECHNIP HAS BEEN SPECIFIED IN THE DOCUMENT THE ROLE OF OWNER TO BE SPECIFIED DURING PREPARATION OF SITE SPECIFIC ITP'S.
- 2 CONTRACTOR TO SUBMIT JOB SPECIFIC REPORTING FORMATS AND JOB PROCEDURES FOR THE JOBS FOR EACH ACTIVITY LISTED IN THE ITP'S AND SUBMIT TO TECHNIP/OWNER FOR APPROVAL. BEFORE COMMENCEMENT OF THE ACTIVITY. IF THE CONTRACTOR HAS TO DEVIATE FROM THE GIVEN ITP FOR A VALID REASON, HE SHALL OBTAIN PRIOR WRITTEN APPROVAL OF TECHNIP/OWNER. CONTRACTOR TO CARRY OUT 100% EXAMINATION OF ALL ACTIVITIES.

		PROJECT: _____ COMPANY: _____		
QUALITY CONTROL FORM CR 10		PROJ. No.: _____	QCF REV. 0	SH. 1 OF 1
CENTRIFUGAL COMPRESSORS INSTALLATION SUMMARY REPORT		CONTRACTOR: _____		

ITEM: _____	TYPE: _____	VENDOR: _____
M.R. _____	AREA: _____	SYSTEM: _____

INSPECTION CHECK LIST (Ref. to QCP 6850.03)		N.A.	ACC.	REMARKS/ REFERENCES	INSPECTOR SIGNATURE & DATE		
					CONT.	TECHNIP	OWNER
B.4	MACHINERY FOUNDATIONS CHECK	<input type="checkbox"/>	<input type="checkbox"/>				
C.1	SHIMS INSTALLATION AND PROPER CHIPPING CHECK	<input type="checkbox"/>	<input type="checkbox"/>				
C.2	POSITIONING & PLANT AXES	<input type="checkbox"/>	<input type="checkbox"/>				
C.3	ELEVATION AND LEVELING	<input type="checkbox"/>	<input type="checkbox"/>	CR 10A (*)			
C.4	DRIVER INSTALLATION	<input type="checkbox"/>	<input type="checkbox"/>				
C.5	GROUTING AUTHORIZATION FOR ANCHOR BOLTS	<input type="checkbox"/>	<input type="checkbox"/>	CW 58 (*)			
C.7	ANCHOR BOLTS PRETIGHTENING	<input type="checkbox"/>	<input type="checkbox"/>				
C.8	PRE ALIGNMENT AND COUPLING HUB DISTANCE	<input type="checkbox"/>	<input type="checkbox"/>	CR 10A (*)			
C.9	GROUTING AUTHORIZATION	<input type="checkbox"/>	<input type="checkbox"/>	CW 58 (*)			
C.11	FINAL ANCHOR BOLTS TIGHTENING	<input type="checkbox"/>	<input type="checkbox"/>				
C.12		<input type="checkbox"/>	<input type="checkbox"/>				
C.13	FLANGES PARALLELISM BEFORE PRESSURE TEST	<input type="checkbox"/>	<input type="checkbox"/>	CR 10A (*)			
C.14		<input type="checkbox"/>	<input type="checkbox"/>	CR 10A (*)			
C.15	NAMEPLATE CHECK	<input type="checkbox"/>	<input type="checkbox"/>				

NOTES: (*) THE QC REPORTS N° SHALL BE INDICATED IN THE RELEVANT HERE BELOW SPACES :
 CR 10A N° _____ CW 58 N° _____

C16)	INSPECTORS	CONTRACTOR	TECHNIP	OWNER
	NAME			
	SIGNATURE			
	DATE			



PROJECT:

COMPANY:

QUALITY CONTROL FORM

CR 10A

PROJ. No.:

QCF REV. 0

SH. 1 OF 1

**CENTRIFUGAL COMPRESSORS
ALIGNMENT REPORT**

CONTRACTOR:

ELEVATION AND LEVELING (REF. POS. C.3)

ALIGNMENT RECORD OF ITEM _____

**FINAL ALIGNMENT – FREE (REF.POS. C.14)
DRIVER TO COMPRESSOR**

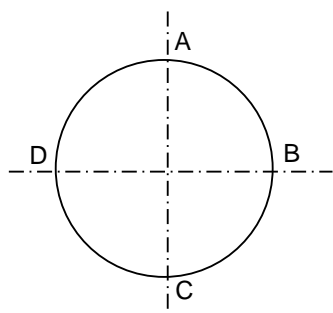
POSITION	A	B	C	D
RADIAL				
AXIAL				

**PRE ALIGNMENT (REF. POS. C.8)
DRIVER TO COMPRESSOR**

POSITION	A	B	C	D
RADIAL				
AXIAL				

**FINAL ALIGNMENT – FLANGED (REF. POS. C.14)
DRIVER TO COMPRESSOR**

POSITION	RADIAL		AXIAL	
	SUCT.	DISCH.	SUCT.	DISCH.
A				
B				
C				
D				

POSITION VIEWED
FROM DRIVERCOMPARATOR READING
ON COUPLING HUB _____**FLANGE PARALLELISM (REF. POS. C.13 – C.14)**

FLANGES	BEFORE PIPING PRESSURE TEST		AFTER PIPING PRESSURE TEST	
	VERT.	HORIZ.	VERT.	HORIZ.
SUCTION				
DISCHARGE				

COUPLING HUB DISTANCE	L
REQUIRED	
ACTUAL (REF. POS. C.8)	
ACTUAL (REF. POS. C.14)	

NOTE:

- ALL DIMENSIONS ARE IN mm
- FOR TOLERANCES SEE VENDOR INSTALLATION MANUAL

REMARKS:

		TECHNIP	OWNER
NAME			



PROJECT:

COMPANY:

QUALITY CONTROL FORM

CW 58

PROJ. No.:

QCF REV. 0

SH. 1 OF 1

GROUTING AUTHORIZATION REPORT

CONTRACTOR:

CW 58 N° _____

STEEL STRUCTURES ☐STATIC EQUIPMENT ☐ROTATING MACHINERY ☐_____ ☐**ITEMS TO BE GROUTED**



_____	AREA	_____
_____	AREA	_____
_____	AREA	_____
_____	AREA	_____
_____	AREA	_____
_____	AREA	_____
_____	AREA	_____
_____	AREA	_____

_____	AREA	_____
_____	AREA	_____
_____	AREA	_____
_____	AREA	_____
_____	AREA	_____
_____	AREA	_____
_____	AREA	_____
_____	AREA	_____

RELEASED BY_____
MECHANICAL
CONTRACTOR_____
DATE_____
TECHNIP_____
DATE

REMARKS:

RECEIVED BY_____
CIVIL
CONTRACTOR_____
DATE_____
TECHNIP_____
DATE

 		PROJECT:	
		COMPANY:	
QUALITY CONTROL FORM W 12/A		PROJ. No.:	SH. ____ OF ____
CONSTRUCTION MATERIALS APPROVAL		CONTRACTOR:	
CIVIL <input type="checkbox"/>	PIPING <input type="checkbox"/>	MACHINERY <input type="checkbox"/>	INSTRUMENT <input type="checkbox"/>
BLDG. <input type="checkbox"/>	MECHANIC. <input type="checkbox"/>	ELECTRICAL <input type="checkbox"/>	PAINTING <input type="checkbox"/>
NDT <input type="checkbox"/>	SUPPORT PRF. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. MATERIALS			
2. SUPPLIER			
3. PURPOSE			
4. ATTACHMENT DATA			
5. TYPE OF TEST PERFORMED			
6. TEST STANDARD UTILIZED			
REMARKS:			
RESULT: ACCEPTED <input type="checkbox"/> NOT ACCEPTED <input type="checkbox"/>			
INSPECTORS	CONTRACTOR	TECHNIP	OWNER
NAME			
SIGNATURE			
DATE			