	PROJECT	Standby SRU & Additional Tanks IOCL Paradip Refinery		
	CLIENT	INDIAN OIL CORPORATION LIMITED		
QCP-PRECAST PIPE_RACK ERECTION	Project No. 080557C001	Document No. 080557C-000-QCP-1710-003	Rev. No. 0	Page 1 of 4

<h2 style="margin: 0;">QUALITY CONTROL PLAN</h2> <h3 style="margin: 0;">PRECAST PIPE-RACK ERECTION</h3>

TYPE OF QUALITY CONTROL REPORT	CERTIFICATION EXTENT
CW 34A, 34B, 34C, 34D	SINGLE REPORT PER EACH ITEM
CW 58	SINGLE REPORT PER EACH AUTHORIZED GROUP OF ITEMS
CW 59	SINGLE REPORT PER EACH REVISED GROUP OF ITEMS

REFERENCE DOCUMENTS:



- 080557C-000-PP-805 SITE CO-ORDINATION & COMMUNICATION PROCEDURE
- 080557C-000-JSS-1700-001 SPECIFICATIONS FOR PLAIN & REINFORCED CEMENT CONCRETE
- 080557C-000-JSS-1700-005 SPECIFICATIONS FOR MATERIALS OF CIVIL STRUCTURAL WORKS
- DRAWINGS

LEGENDA

H	=	HOLD (RFI required - Work stop for inspection)
W	=	WITNESS (RFI required)
WC	=	100 % SUPERVISION AND EXAMINATION BY CONTRACTOR.
P	=	PREPARATION.
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)

0	19.11.2019	ISSUED FOR IMPLEMENTATION	TB	PKP / LA	LA	JMC
REV.	DATE	STATUS	WRITTEN BY	CHECKED BY	APPROVED BY	AUTHOR. BY
DOCUMENT REVISIONS						

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QCP-PRECAST PIPE_RACK ERECTION	Project No. 080557C001	Document No. 080557C-000-QCP-1710-003	Rev. No. 0	Page 2 of 4

QUALITY CONTROL PLAN



PRECAST PIPE-RACK ERECTION

QUALITY CONTROL ACTIVITIES

S.NO	CHECK AND INSPECTION ITEM	QUALITY CONTROL FORM	ACTION		NOTES
			CONTRACTOR	TECHNIP	
A)	PRELIMINARY ACTIVITIES				
A.1	CONTRACTOR DRAWINGS CHECK REVISION STATUS	N.A.	!	!	
A.2	CONTRACTOR TECHNICAL SPECIFICATION AND PROCEDURE	N.A.	IFA	A	
A.3	CONTRACTOR METHOD STATEMENT & ENGINEERED LIFTING STUDY (IF REQUIRED)	N.A.	P	A	(1)
A.4	WELDING PROCEDURES AND WELDERS QUALIFICATION		WC	W/R	(3)
B)	BEFORE ERECTION				
B.1	MATERIAL RELEASED AND CONSERVATION STATUS	N.A.	WC	R	
B.2	FOUNDATIONS CHECK	CW34A	WC	W/R	
C	PIPE RACK ERECTION				
C.1)	PRECAST FRAME / COLUMNS INSTALLATION				
C.1.1	CLEANING AND WETTING OF PEDESTAL FACE	CW34A	WC	R	
C.1.2	COLUMN PHYSICAL APPEARANCE CHECK	CW 34A	WC	W/R	
C.1.3	COLUMN INSTALLATION	CW 34A	WC	R	
C.1.4	COLUMN POSITIONING: - ORIENTATION - ELEVATION - ALIGNMENT - PLUMBNESS	CW 34A	WC	R	
C.1.5	AUTHORIZATION FOR GROUTING	CW 58/CW 34A	WC	A	(2)
C.1.6	NON SHRINKING GROUT EXECUTION	CW 59/CW 34A	WC	R	
C.1.7	FINAL DOCUMENTATION REVIEW	CW 34A	P	R	
C.2	FIXED BEAM (MOMENT BEAM) INSTALLATION				
C.2.1	CLEANING OF SUPPORTING SURFACES	CW 34B	WC	R	
C.2.2	BEAM PHYSICAL APPEARANCE CHECK	CW 34B	WC	W/R	
C.2.3	BEAM INSTALLATION	CW 34B	WC	W/R	
C.2.4	BEAM LEVEL CHECK	CW 34B	WC	W/R	
C.2.5	AUTHORIZATION FOR POURING	CW 58 / CW 34B	WC	A	(2)
C.2.6	POURING EXECUTION	CW 59 / CW 34B	WC	R	

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QCP-PRECAST PIPE_RACK ERECTION	Project No. 080557C001	Document No. 080557C-000-QCP-1710-003	Rev. No. 0	Page 3 of 4

QUALITY CONTROL PLAN

PRECAST PIPE-RACK ERECTION

QUALITY CONTROL ACTIVITIES



S.NO	CHECK AND INSPECTION ITEM	QUALITY CONTROL FORM	ACTION		NOTES
			CONTRACTOR	TECHNIP	
C.2.6.1	SLUMP TEST	CW 34B	WC	W/R	
C.2.6.2	SAMPLE STRENGHT TEST	CW 34B	WC	W/R	
C.2.7	CURING	CW 34B	WC	S	
C.2.8	STRENGHT TEST RESULT & SAMPLE UNIT WEIGHT	CW 34B	WC	W/R	
C.2.9	FINAL DOCUMENTATION REVIEW	CW 34B	P	R	
C.3	PRECAST PINNED BEAMS INSTALLATION				
C.3.1	CLEANING OF SUPPORTING SURFACES	CW34C	WC	S	
C.3.2	STEEL PIN SETTING	CW34C	WC	W/R	
C.3.3	AUTHORIZATION FOR GROUTING	CW 58 / CW34C	WC	A	(2)
C.3.4	NON SHRINKING GROUTING	CW 59 / CW34C	WC	R	
C.3.5	BEAM PHISYCAL APPEARANCE CHECK	CW34C	WC	W/R	
C.3.6	BEAM INSTALLATION	CW34C	WC	R	
C.3.7	BEAM LEVELNESS	CW34C	WC	W/R	
C.3.8	FINAL DOCUMENTATION REVIEW	CW34C	P	R	
C.4	CORBELS INSTALLATION FOR PINNED BEAMS SUPPORT				
C.4.1	WELDING OF CORBEL ON THE EMBEDDED PLATE	CW 34D	WC	R	(3)
C.4.2	NDE OF WELDING BETWEEN CORBEL AND EMBEDDED PLATE	CW 34D	WC	R	(3)
C.4.3	CORBEL LEVEL CHECK	CW 34D	WC	W/R	
C.4.4	AUTHORIZATION FOR GROUTING (IF ANY)	CW 58 /	WC	A	(2)
C.4.5	NON SHRINKING GROUTING (IF ANY)	CW 34D CW 59 / CW 34D	WC	R	
C.4.6	FINAL DOCUMENTATION REVIEW	CW 34D	P	R	

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

(2) THESE GROUTING AUTHORIZATION REPORTS WILL BE ALWAYS AVAILABLE DURING THE CONSTRUCTION
BUT NOT INCLUDED IN THE CONSTRUCTION QUALITY DOSSIER FORMS, INSPECTIONS AND ATTENDANCE
SHALL BE IN ACCORDANCE WITH REFERRED QCP

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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

CW 34A

PROJ. No.:

QCF REV. 0

SH. 1 OF 1

**PRECAST PIPE-RACK ERECTION
(PRECAST FRAME / COLUMNS)**

CONTRACTOR:

CW 34A N° _____

ITEM _____



AREA _____

DWG'S & REV _____

INSPECTIONS (REF. TO QCP 1710.03)		N.A.	ACC	REMARKS / REFERENCES	INSPECTORS SIGNATURE & DATE		
					CONTRACTOR.	TECHNIP	OWNER
B.2	FOUNDATION CHECK	<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>	SEE ATTACHED SKETCH			
		<input type="checkbox"/>	<input type="checkbox"/>				
		<input type="checkbox"/>	<input type="checkbox"/>				

--	--	--	--	--	--	--	--

C.1.7 FINAL DOC. REVIEW	INSPECTORS	CONTRACTOR	TECHNIP	OWNER
	NAME			
	SIGNATURE			
	DATE			

 				PROJECT:					
				COMPANY:					
QUALITY CONTROL FORM CW 34C				PROJ. No.:	QCF REV. 0	SH. 1 OF 1			
PRECAST PIPE-RACK ERECTION (PRECAST PINNED BEAMS)				CONTRACTOR:		CW 34C N° _____			
ITEM _____ AREA _____ DWG'S & REV _____									
INSPECTIONS (REF. TO QCP 1710.03)			N.A.	ACC	REMARKS / REFERENCES		INSPECTORS SIGNATURE & DATE		
							CONTRACTOR	TECHNIP	OWNER
C.3	PRECAST PINNED BEAMS INSTALLATION								
		<input type="checkbox"/>	<input type="checkbox"/>						
		<input type="checkbox"/>	<input type="checkbox"/>						
	YES <input type="checkbox"/> NO <input type="checkbox"/>			CW 58 (*)					
C.3.4	EXECUTION (IF ANY)	<input type="checkbox"/>	<input type="checkbox"/>	CW 59 (*)					
		<input type="checkbox"/>	<input type="checkbox"/>						
		<input type="checkbox"/>	<input type="checkbox"/>						
		<input type="checkbox"/>	<input type="checkbox"/>	SEE ATTACHED SKETCH					
NOTES: (*) THE QC REPORTS N° SHALL BE INDICATED IN THE RELEVANT HERE BELOW SPACES : CW 58 N° _____ CW 59 N° _____									
C.3.8 FINAL DOC. REVIEW	INSPECTORS	CONTRACTOR		TECHNIP		OWNER			
	NAME								
	SIGNATURE								
	DATE								

				PROJECT:						
COMPANY:										
QUALITY CONTROL FORM CW 34D				PROJ. No.:		QCF REV. 0		SH. 1 OF 1		
PRECAST PIPE-RACK ERECTION (CORBEL INSTALLATION FOR PINNED BEAMS SUPPORT)				CONTRACTOR:				CW 34D N° _____		
ITEM _____ AREA _____ DWG'S & REV _____										
INSPECTIONS (REF. TO QCP 1710.03)				N.A.	ACC	REMARKS / REFERENCES		INSPECTORS SIGNATURE & DATE		
								CONTRACTOR	TECHNIP	OWNER
C.4	CORBEL INSTALLATION FOR PINNED BEAMS SUPPORT									
				<input type="checkbox"/>	<input type="checkbox"/>					
				<input type="checkbox"/>	<input type="checkbox"/>					
				<input type="checkbox"/>	<input type="checkbox"/>					
						SEE ATTACHED SKETCH				
	YES <input type="checkbox"/> NO <input type="checkbox"/>					CW 58 (*)				
						CW 59 (*)				
NOTES: (*) THE QC REPORTS N° SHALL BE INDICATED IN THE RELEVANT HERE BELOW SPACES : CW 58 N° _____ CW 59 N° _____										
C.4.6) FINAL DOC. REVIEW	INSPECTORS		CONTRACTOR			TECHNIP		OWNER		
	NAME									
	SIGNATURE									
	DATE									



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		CW 59	PROJ. No.: _____	QCF REV. 0																																																																
GROUTING INSPECTION REPORT		CONTRACTOR: _____		SH. 1 OF 1																																																																
ITEMS READY FOR GROUTING																																																																				
_____	AREA	_____	_____	_____																																																																
_____	AREA	_____	_____	_____																																																																
_____	AREA	_____	_____	_____																																																																
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_____	AREA	_____	_____	_____																																																																
GROUT TYPE:																																																																				
TYPE:	PORTLAND CEMENT GROUT	<input type="checkbox"/>	Brand _____	THK mm _____																																																																
TYPE:	NON SHRINKING GROUT	<input type="checkbox"/>	Brand _____	THK mm _____																																																																
TYPE:	EPOXY GROUT	<input type="checkbox"/>	Brand _____	THK mm _____																																																																
TYPE:	_____	<input type="checkbox"/>	Brand _____	THK mm _____																																																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">INSPECTIONS (REF. TO QCP 1760.01)</th> <th style="text-align: center;">N.A.</th> <th style="text-align: center;">ACC</th> <th style="text-align: center;">REMARKS/ REFERENCES</th> <th colspan="3" style="text-align: center;">INSPECTORS SIGNATURE & DATE</th> </tr> <tr> <th colspan="2"></th> <th></th> <th></th> <th></th> <th style="text-align: center;">CONTRACTOR</th> <th style="text-align: center;">TECHNIP</th> <th style="text-align: center;">OWNER</th> </tr> <tr> <td style="text-align: center;">C.2</td> <td style="text-align: center;">SURFACE CLEANING& SOAKING</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">C.3</td> <td style="text-align: center;">FORM WORK INSTALLATION</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">C.4</td> <td style="text-align: center;">GROUT PREPARATION AND EXPIRING DATE CHECK</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">C.5</td> <td style="text-align: center;">GROUTING</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">C.6</td> <td style="text-align: center;">FORMWORK REMOVAL AND SURFACE VISUAL APPARENCE</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">C.7</td> <td style="text-align: center;">SURFACE REPAIRING</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					INSPECTIONS (REF. TO QCP 1760.01)		N.A.	ACC	REMARKS/ REFERENCES	INSPECTORS SIGNATURE & DATE								CONTRACTOR	TECHNIP	OWNER	C.2	SURFACE CLEANING& SOAKING	<input type="checkbox"/>	<input type="checkbox"/>					C.3	FORM WORK INSTALLATION	<input type="checkbox"/>	<input type="checkbox"/>					C.4	GROUT PREPARATION AND EXPIRING DATE CHECK	<input type="checkbox"/>	<input type="checkbox"/>					C.5	GROUTING	<input type="checkbox"/>	<input type="checkbox"/>					C.6	FORMWORK REMOVAL AND SURFACE VISUAL APPARENCE	<input type="checkbox"/>	<input type="checkbox"/>					C.7	SURFACE REPAIRING	<input type="checkbox"/>	<input type="checkbox"/>				
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