

PROCESS SPECIFICATION				Amec Foster Wheeler USA Corporation		wood.	
CUSTOMERS NAME: Saudi Aramco Total Refining & Petrochemical Co. (SATORP)				PROJECT No: 265130			
LOCATION: Jubail, Saudi Arabia				UNIT No: 021			
SERVICE: Coke Pit / Coke Maze Wall Port Grating				ITEM No:		No. REQD: 16	
PROJECT: Jubail Export Refinery, MOC-52-5717 Coke Pit Screens				DOCUMENT CAT.-CLASS 1			
REV.	A	B		DOCUMENT No. 265130-0000 -DC00-DAT-0001			
DATE	7-Apr-25	10-Apr-25		PAGE 1		OF 3	
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CHK. BY	JVS			REVISION STATE: Issued for Information			
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SCOPE:

This is a duty specification for the grating to be used in the existing ports located along the bottom of the walls between the Coke Pit and each Coke Settling Maze. Refer to sketches on Pages 2 and 3 for size and location of existing ports.

PROCESS DESCRIPTION:

The existing pit and mazes separate coke and water exiting from the coke drum during the decoking operation. During decoking, coke and water fall through the coke chute into the pit. Coke collects in the pit while water flows toward the mazes. Water flows through the grated drain ports along the bottom of the pit wall into the Fines Sump.

PROCESS REQUIREMENTS:

Number Required: Gratings to be provided for the existing eight drain ports along the bottom of the walls between the pit and each Fines Sump, as shown on page 3. 16 total required.

Dimensions: Gratings to fit within existing ports. Existing port dimensions are 915 mm high and 1,800 mm wide.

Bar Spacing: Gratings to have minimum 25 mm x 25 mm openings (clear opening). Maximum allowable openings 25 mm x 50 mm (clear openings). Openings can be adjusted based on vendor standard grating sizes.

Bearing Bar: Gratings to be provided with bearing bars that are a minimum 60 mm wide and 5 mm thick.

Free Air Passage: Grating selection should provide a minimum of 70% open area based on the process requirements provided. Open area to consider final bearing bar selection and grating supports.

Coke Particle Size:	Size	Precent, wt%	
(In-Pit)	below 25 mm	86.5	
	between 25 to 50 mm	9.7	
	between 50 to 75 mm	2.2	
	above 75mm	1.6	

MECHANICAL DESIGN:

Design Pressure, kg/cm²g ATM

Design Temperature, °C 95

Material 316 SS / 316L SS / Galvanized CS

Material per SATORP preference. AFW recommends SS for longest design life / corrosion protection.

Contaminates:

NH3, wppm	60
H2S, wppm	10
Chlorides, wppm	25 (50 max)
Phenols, wppm	400
pH	7.8

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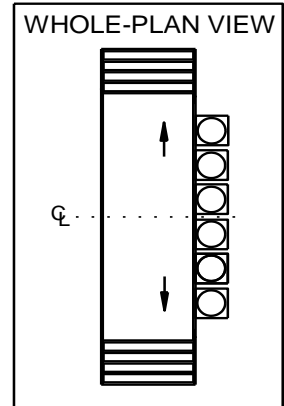
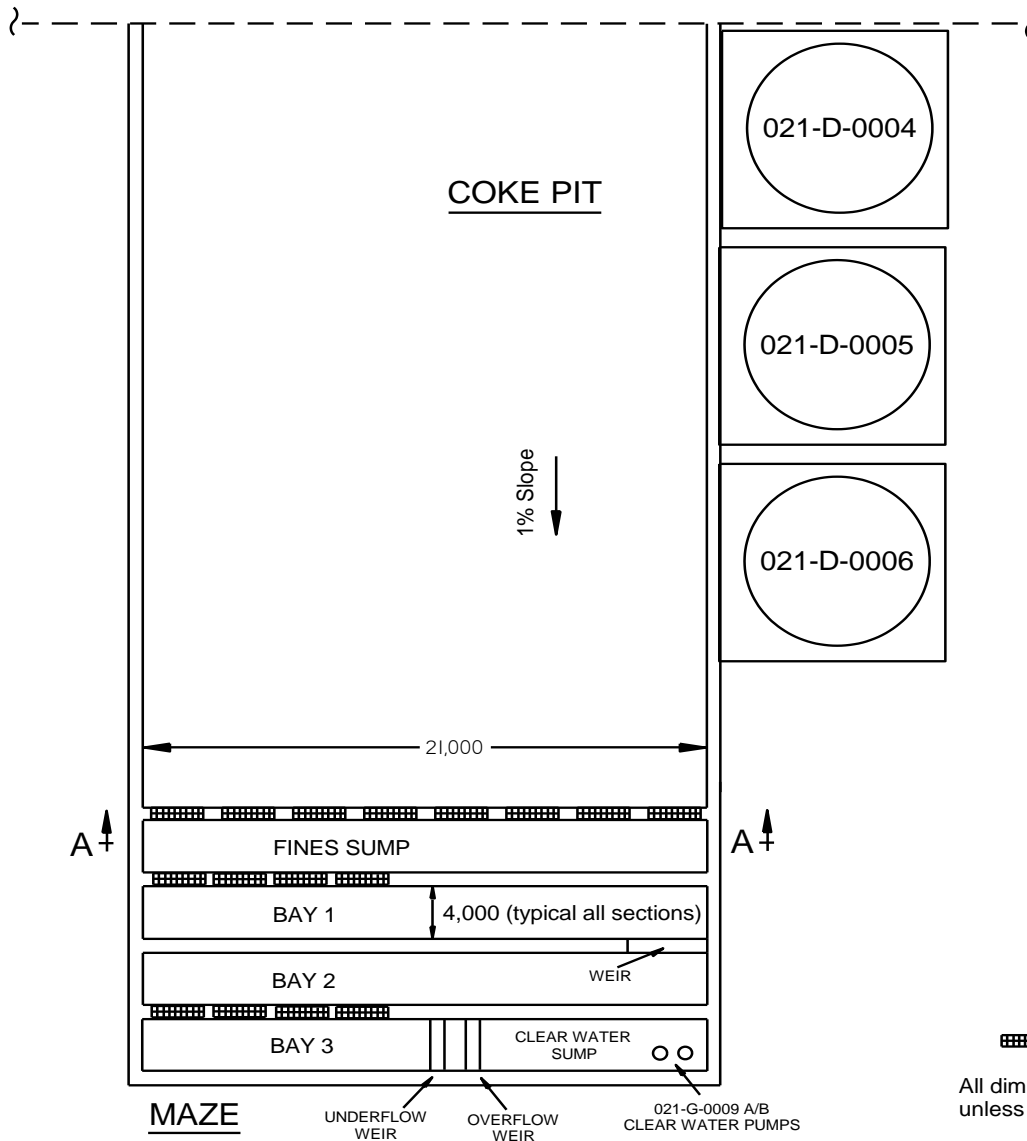
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HALF-PLAN VIEW



▨ = PORT

All dimensions are in mm,
unless otherwise noted.

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PROCESS SPECIFICATION

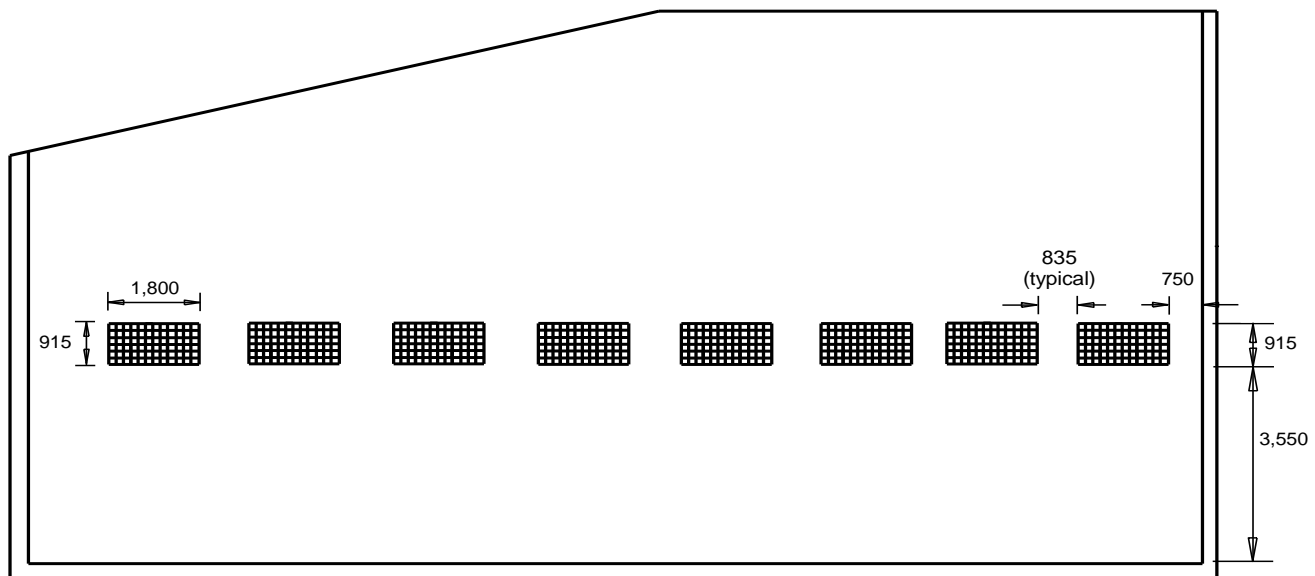
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SECTION A-A

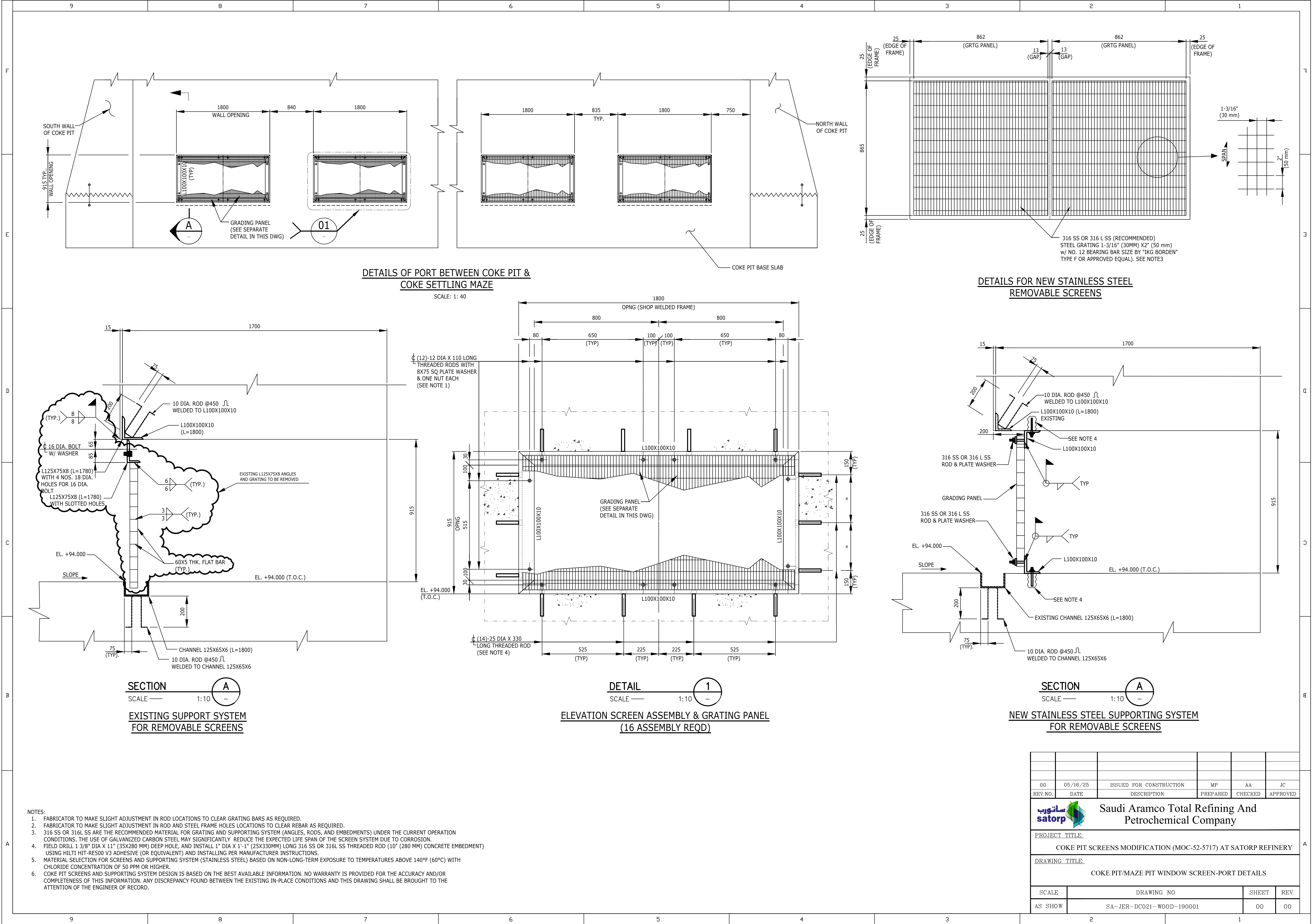
WALL BETWEEN PIT AND FINES SUMP



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00	05/16/25	ISSUED FOR CONSTRUCTION	MP	AA	JC
REV. NO.	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
Saudi Aramco Total Refining And Petrochemical Company					
PROJECT TITLE:					
COKE PIT SCREENS MODIFICATION (MOC-52-5717) AT SATORP REFINERY					
DRAWING TITLE:					
COKE PIT/MAZE PIT WINDOW SCREEN-PORT DETAILS					
SCALE	DRAWING NO			SHEET	REV.
AS SHOW	SA-JER-DC021-WOOD-190001			00	00