INTER-COMPANY MEMO

KOCH INDUSTRIES INC

Memo No. 1950-25

DATE: February 12, 1991

TO: J. W. Johnson/J. S. Hardy

FROM: R. H. Rothfeder

PLAINTIFF'S EXHIBIT KRC-39

SUBJECT: INSTALLATION OF TEMPORARY PARALLEL CHLORIDE TREATER RFE No. 0436R006

Process Engineering has reviewed the recommendations made by Operations to use the old Unifiner reactor as a swing chloride treater in the CCR. The Unifiner reactor (DC-1201) is not ideal; however, it is recommended as a temporary chloride treater for use during loading of the existing chloride treater (FA-3913). A sketch of the piping revisions and the updated P&ID'S are attached.

The Unifiner reactor (DC-1201) is designed for pressure of 650 PSIG, at a temperature of 700°F. The chloride treater operating conditions are 114 PSIG and 100°F. The reactor is 13.0 ft. tangent to tangent and has a diameter of 4.5 ft. It has an 18" manway, 10" outlet, and 4" dump nozzle.

Modifications will have to be made to the existing piping and the Unifiner reactor prior to placing it in service as a chloride treater. Piping modifications are needed to accommodate spool pieces ("T" shaped) to tie the Unifiner reactor into the existing system. The inlet and outlet spool pieces will need to be equipped with 12" valves and blinds that will point east. The modifications are shown in the attached marked up P&ID. All piping flanges will be raised face with 125 Ra finish. Reactor mating flanges need to be RTJ's. The following modifications to the old Unifiner reactor will need to be made prior to being put into chloride treater service.

1. Remove the insulation (which may be asbestos) from the Unifiner reactor.
2. Clean and reuse existing inlet distributer for new treater service.
3. Fabricate a new outlet basket designed to fit a 10" outlet based on the existing treater's outlet basket. Drawings are attached.
4. Fabricate a new dump sleeve designed to fit a 4" dump nozzle based on existing treater's dump nozzle. Drawings are attached.
5. Skid mount the Unifiner reactor north of the existing chloride treater and analyzer shack.

Operations and Process Engineering requests Refinery Engineering to expedite the work needed to modify the existing piping. In addition, they are requested to start looking at relocation and modification of the old Unifiner reactor for the CCR. Relief valve sizing and additional information will follow.

RHR/nkj
Attachments
cc: BWB, JTC, REF, EWF, REM, CLP, DMW, CJW

K 010154

K 010155

UOP Process Division • UOP Inc
20 UOP Plaza • Algonquin & Mt Prospect Roads • Des Plaines, Illinois U.S.A.

VESSELS

PROJECT SPECIFICATION

NUMBER	REVISION
6209 – 301 –	0

SHEET 10 OF

BY APP'D

DATE 11/11/85

NAME OF REACTOR BOOSTER COMPRESSOR SUCTION CHLORIDE TREATER

ITEM FA-3913

DESIGN CONDITIONS	INT: 160 PSIG @ 240°F		
	EXT: 14.7 PSI @ 190°F		
OPERATING CONDITION	TEMPERATURE 190°F		
RADIOGRAPH	M.R.		
POSTWELD HEAT TREAT	SYES		
JOINT EFF.	M.R.		
MATERIAL SPECIFICATIONS			
HEADS	KILLED CARBON STEEL		
SHELL	KILLED CARBON STEEL		
SHELL	Thickness Req'd By Code	Corrosion Allowance INCHES	
	M.R.	0.125	MIN.
HEADS			
	M.R.	0.125	MIN.
REACTOR HEADS TYPE ELLIPTICAL			

ACCESSORIES APPLIED BY FABRICATOR	
LADDERS & PLATFORM CLIPS	YES
INSULATION CLIPS & RINGS	NO
REACTOR SUPPORT SKIRT	YES

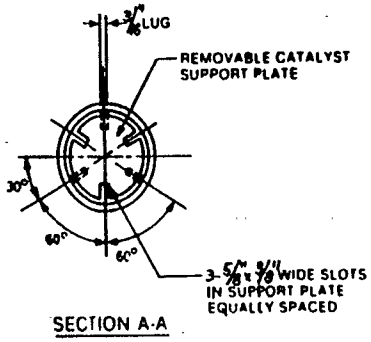
NOZZLES AND MANWAYS

MARK	NO	SIZE	SERVICE
A	1	12"	INLET
B	1	24" I.D.	MANWAY
C	1	12"	OUTLET
D	1	6"	CATALYST WITHDRAWAL

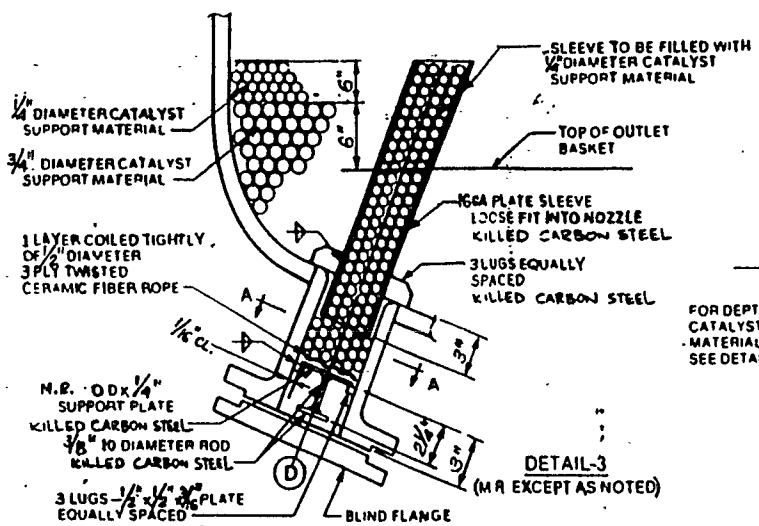
RATING AND FACING ANSI CLASS 150 R.F. WITH 125 Ra FLANGE FINISH

NOTES

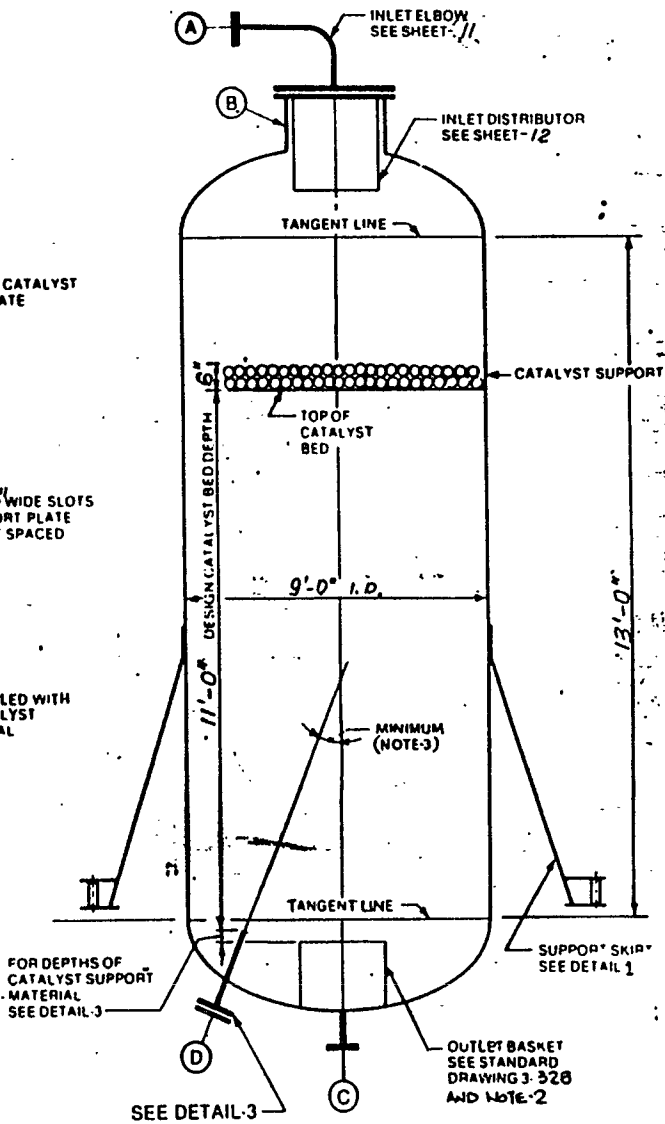
1. ALL INTERNALS TO BE FABRICATED TO PASS THRU A 24" I.D. MANWAY
2. OUTLET BASKET MATERIAL TO BE KILLED CARBON STEEL.
3. CONTRACTOR TO ORIENT – SUITABLE FOR MAXIMUM CATALYST REMOVAL PROVIDE PROPER WORKING CLEARANCES BETWEEN FLANGES C D AND VESSEL SUPPORT.
4. FOR VOLUME OF CATALYST SUPPORT MATERIAL TO BE SUPPLIED BY OTHERS SEE UOP PROJECT SPECIFICATION 6209-312.
5. DESIGN CATALYST DENSITY 48 LBS/FT³ DESIGN CATALYST SUPPORT MATERIAL DENSITY 125 LBS/FT³.



SECTION A-A



DETAIL-3
(M.R. EXCEPT AS NOTED)



REACTOR ELEVATION

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