TAILS GAS REACTOR (R-1) DESIGN SUMMARY

SIZE: 12" SCH 40 PIPE x 80' LONG WITH ONE 180° RETURN

TYPE: HORIZONTAL

DESIGN PRESSURE: EXTERNAL - ATMOS.
INTERNAL - 150 PSIG & FV

DESIGN TEMPERATURE: 300°F

CORROSION ALLOWANCE: NONE

MATERIALS: PIPE - Ni-200
FLANGES - Ni CLAD
MATERIALS IN CONTACT WITH PROCESS FLUIDS TO BE Ni-200. REST C.S.
GASKETS - GRAPHITED ASBESTOS GARLOCK 901

INTERNALS: STATIC MIXER ASSEMBLIES FLANGED AT BOTH ENDS TO PROVIDE CONTINUOUS DISPERSION OF GAS IN LIQUID. VENDOR TO PROVIDE DETAILS REGARDING THE LENGTH AND SPACING OF THE MIXERS FOR THE APPLICATION.

INSULATION: THICKNESS - 1½"
WILL BE DONE ON-SITE AFTER INSTALLATION.

INSPECTION: BY PPG

REMARKS: THE INLET NOZZLES FOR CHLORINE, EDC AND THE COMBINED VENT STREAM SHOULD BE CAREFULLY DESIGNED TO AVOID BACKFLOW OF ANY OF THE STREAMS IN ANY OTHER STREAM PIPING DURING NORMAL REACTOR OPERATION. THE CHLORINE AND EDC ENTRY NOZZLES TO BE PROVIDED WITH SPARGERS (VENDOR DESIGN). KOMAX SYSTEMS, INC. IS THE PREFERRED VENDOR.

PROVIDE ROOM FOR EXTRA MIXERS AND REACTOR LENGTH IN THE PLOT PLAN FOR ANY FUTURE EXPANSIONS/CHANGES.

THE ABOVE DESIGN IS SUBJECT TO CHANGE BASED ON LABORATORY SCALE STUDIES BEING CONDUCTED.

VENDOR TO RECOMMEND A MODE OF OBSERVING/MONITORING THE FLOW PATTERN AT THE INLET AND OUTLET TO THE MIXERS. PLEASE NOTE THAT THE LIQUID IS DIRTY AND OPAQUE.

NOZZLE SCHEDULE

MK.	NO. REQD.	SIZE	RATING (PSI)	FACING	SERVICE REMARKS
A*	1	4"	150	RF	EDC INLET W/SPARGER
B*	1	3"	150	RF	CHLORINE INLET W/SPARGER
T	4	1½"	150	RF	TI
D	1	2"	150	RF	SPARE
E	1	1½"	150	RF	PI
F	1	1½"	150	RF	PI

*PROVIDE MIXER ASSEMBLY IN THE IMMEDIATE VICINITY OF A & B. THE NOZZLES TO BE FLUSH WITH THE REACTOR.