DESIGN OF SHELL PLATE

(FROM API 650)

PART NAME : SHELL

1. DESIGN CONDITION

D	:	NOMINAL INSIDE DIAMETER OF TANK	=	2.35	m
Ht	:	TOTAL HEIGHT OF TANK SHELL	=	2.593	m
Hd	:	DESIGN LIQUID LEVEL	=	2.593	m
Hn	:	HIGH LIQUID LEVEL	=	2.5	m
DT	:	DESIGN TEMPERATURE	=	40	^{o}C
H	:	LIQUID LEVEL FOR THE DESIGN CONDITION			
Pi	:	DESIGN INTERNAL PRESSURE	=	204	mmH_2O
Pe	:	DESIGN EXTERNAL PRESSURE	=	61.2	mmH_2O
Gi	:	SPECIFIC GRAVITY OF LIQUID	=	1	
G	:	DESIGN SPECIFIC GRAVITY OF LIQUID	=	1	
CA	:	CORROSION ALLOWANCE OF SHELL	=	0	mm
CAr	:	CORROSION ALLOWANCE OF ROOF	=	0	mm
CAb	:	CORROSION ALLOWANCE OF BOTTOM	=	0	mm
CAs	:	CORROSION ALLOWANCE OF STRUCTURE	=	1.5	mm
trs	:	REQUIRED SHELL THICKNESS (LARGER OF tcs or tms)			
tcs	:	CALCULATED SHELL THICKNES (LARGER OF td or tt)			
td	:	SHELL THICKNESS FOR THE DESIGN CONDITION			
tt	:	SHELL THICKNESS FOR THE HYDRO. TEST CONDITION			
tms	:	MINIMUM SHELL THICKNESS	=	5	mm
Fy	:	MINIMUM YIELD STRENGTH			
Ft	:	MINIMUM TENSILE STRENGTH			
Sd	:	ALLOWABLE STRESS FOR THE DESIGN CONDITION			
St	:	ALLOWABLE STRESS FOR THE TEST CONDITION			
V	:	DESIGN WIND VELOCITY = 162.0 Km/h	=	45	m/sec.
Z	:	SEISMIC ZONE FACT((ZONE : 2A)	=	0.15	
Fr	:	YIELD STRENGTH REDUCTION FACTOR	=	1.00	
E	:	JOINT EFFICIENCY	=	0.85	