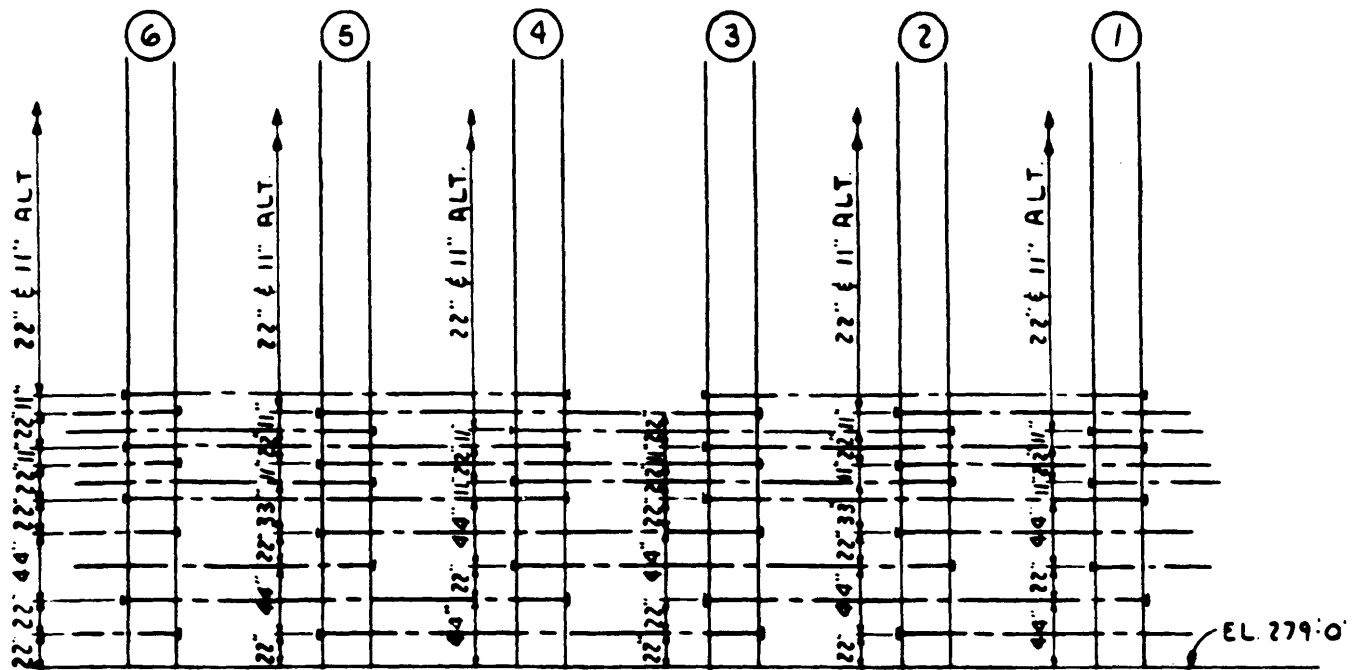


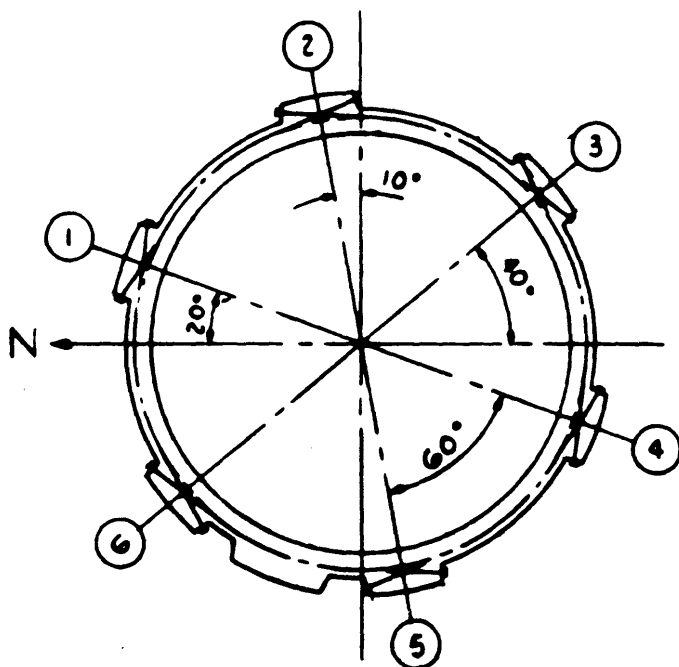
TMI UFSAR

Figures 5D-1 through 5D-6

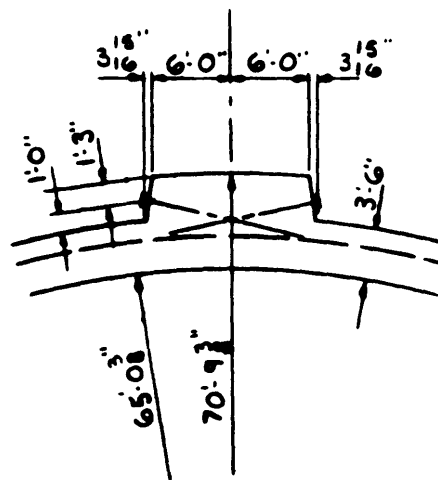
Deleted



LOCATION OF TENDONS IN BUTTRESSES

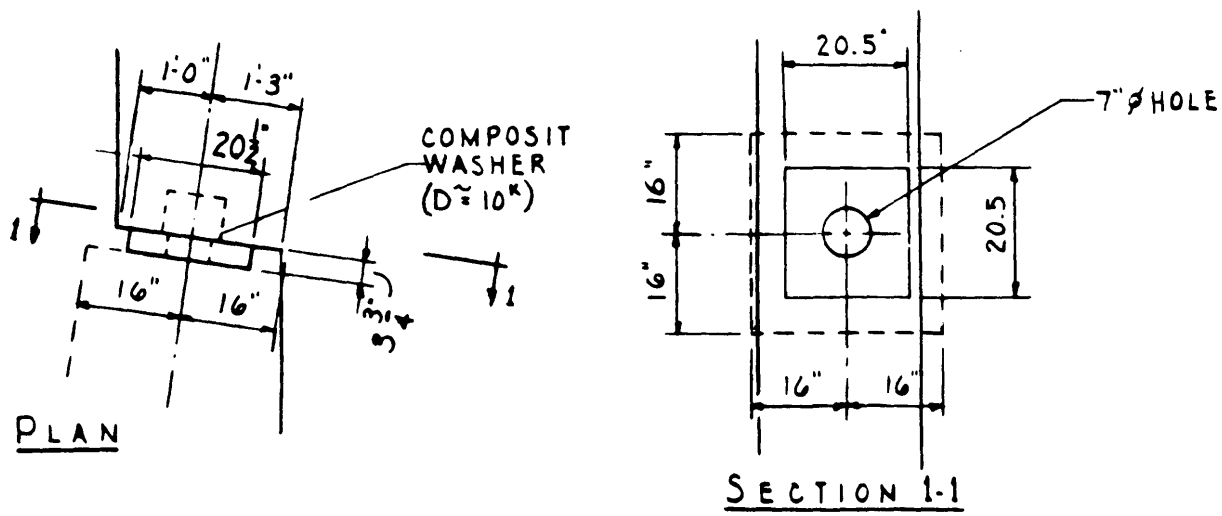


CROSS SECTION THRU REACTOR BLOC

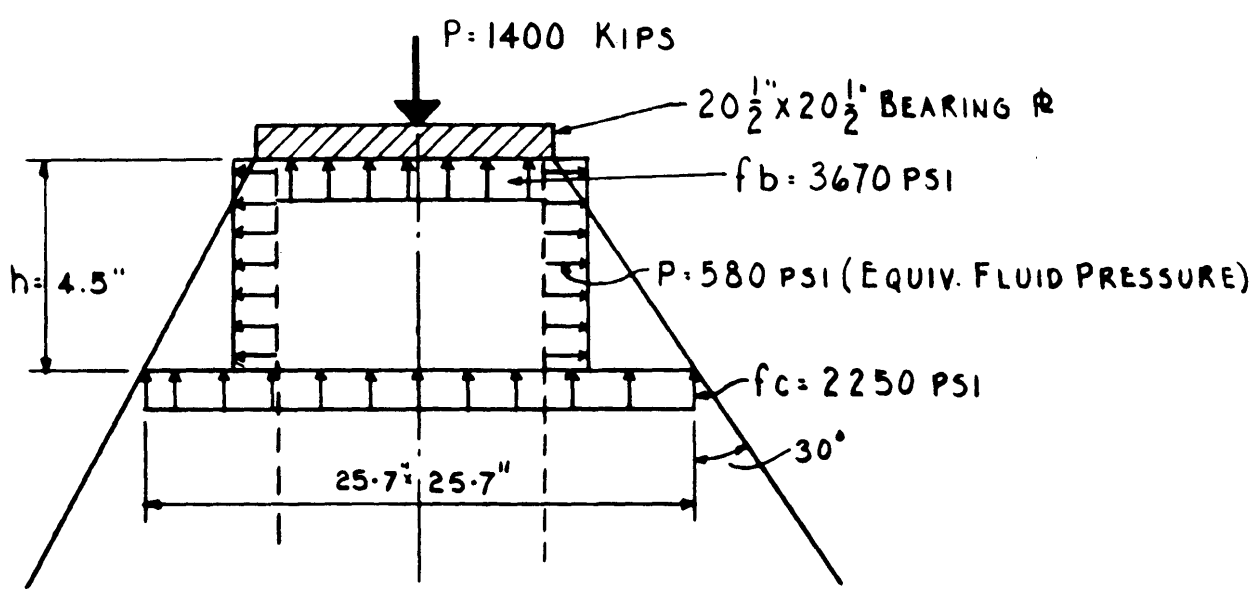


DETAIL OF BUTTRESS (TYP)

GPU Nuclear TMI Unit-1	Update - 1
	7/82
Typical Hoop Tendon Arrangement	
Fig. 5D-7	

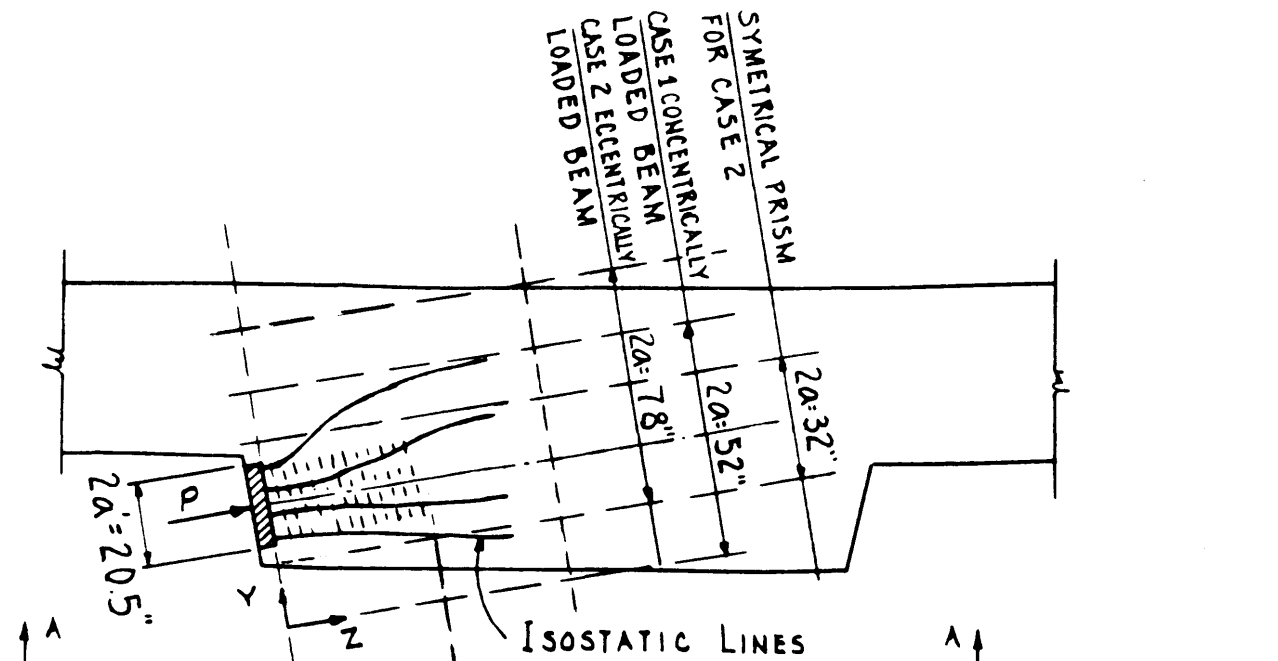


a. BUTTRESS DETAILS - BEARING STRESSES

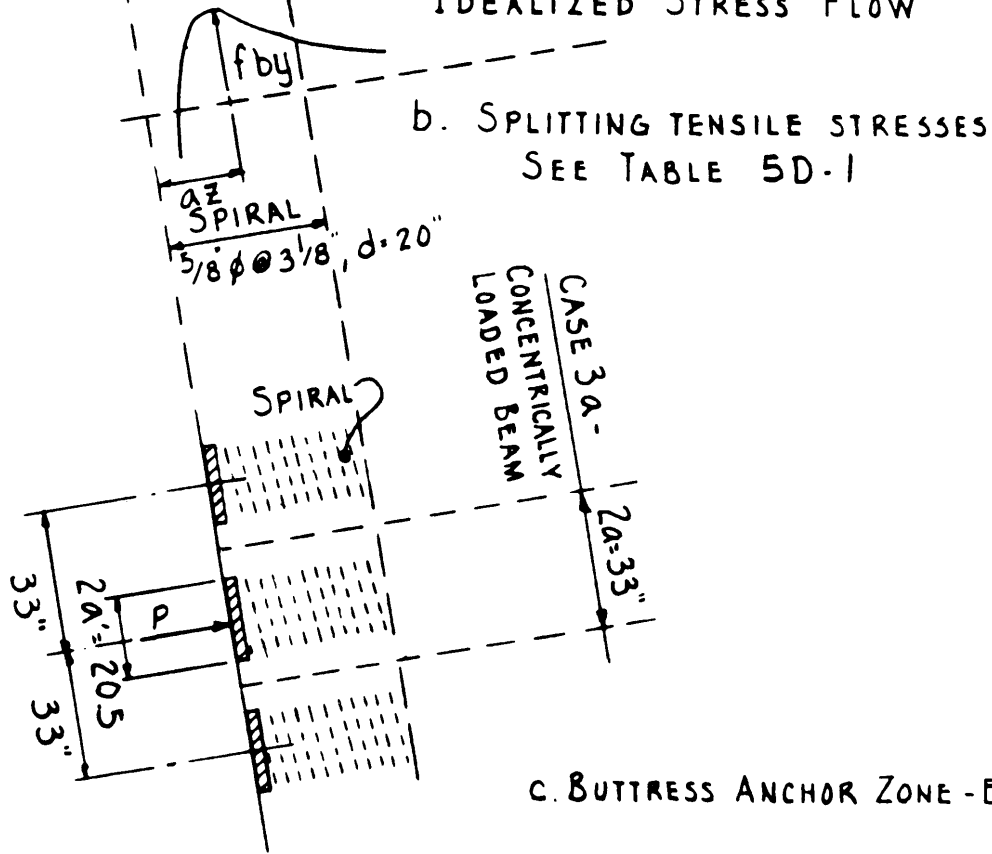


b. EQUIVALENT FLUID PRESSURE

<p>GPU Nuclear</p> <p>TMI Unit-1</p> <p>Buttress-Hoop Tendon Bearing Stresses</p>	Update -1
	7/82
	Fig. 5D-8



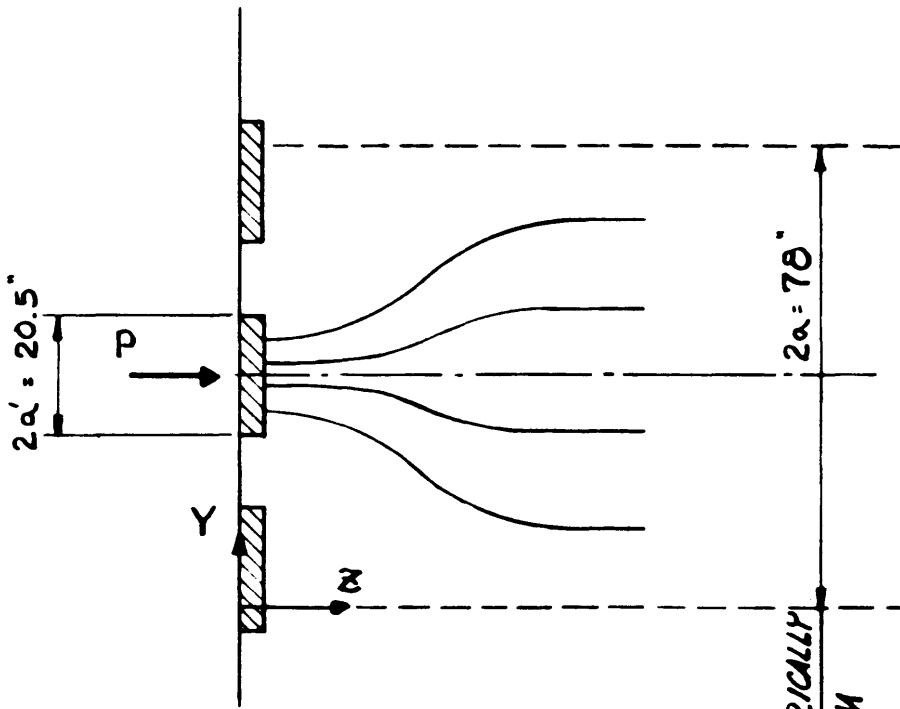
a. BUTTRESS ANCHOR ZONE - PLAN
IDEALIZED STRESS FLOW



b. SPLITTING TENSILE STRESSES
SEE TABLE 5D-1

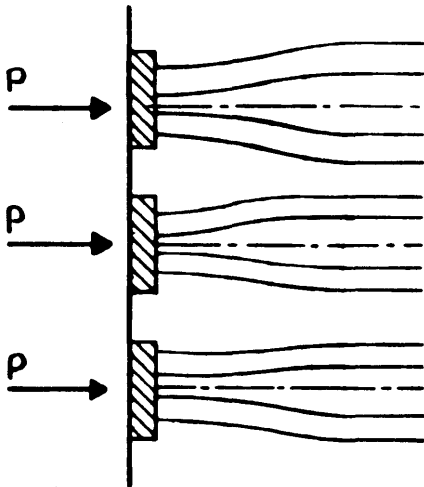
c. BUTTRESS ANCHOR ZONE - ELEVATION

GPU Nuclear TMI Unit-1	Update - 1
	7/82
Buttress-Radial Bursting Stresses	
Fig. 5D-9	



CASE - 3 CONCENTRICALLY
LOADED BEAM

a. BUTRESS ANCHOR ZONE
ELEVATION IDEALIZED STRESS
FLOW, ONE TENDON STRESSED



b. BUTRESS ANCHOR ZONE
ELEVATION IDEALIZED STRESS
FLOW, ALL TENDONS STRESSED

p. 5D.FIG-10

GPU Nuclear

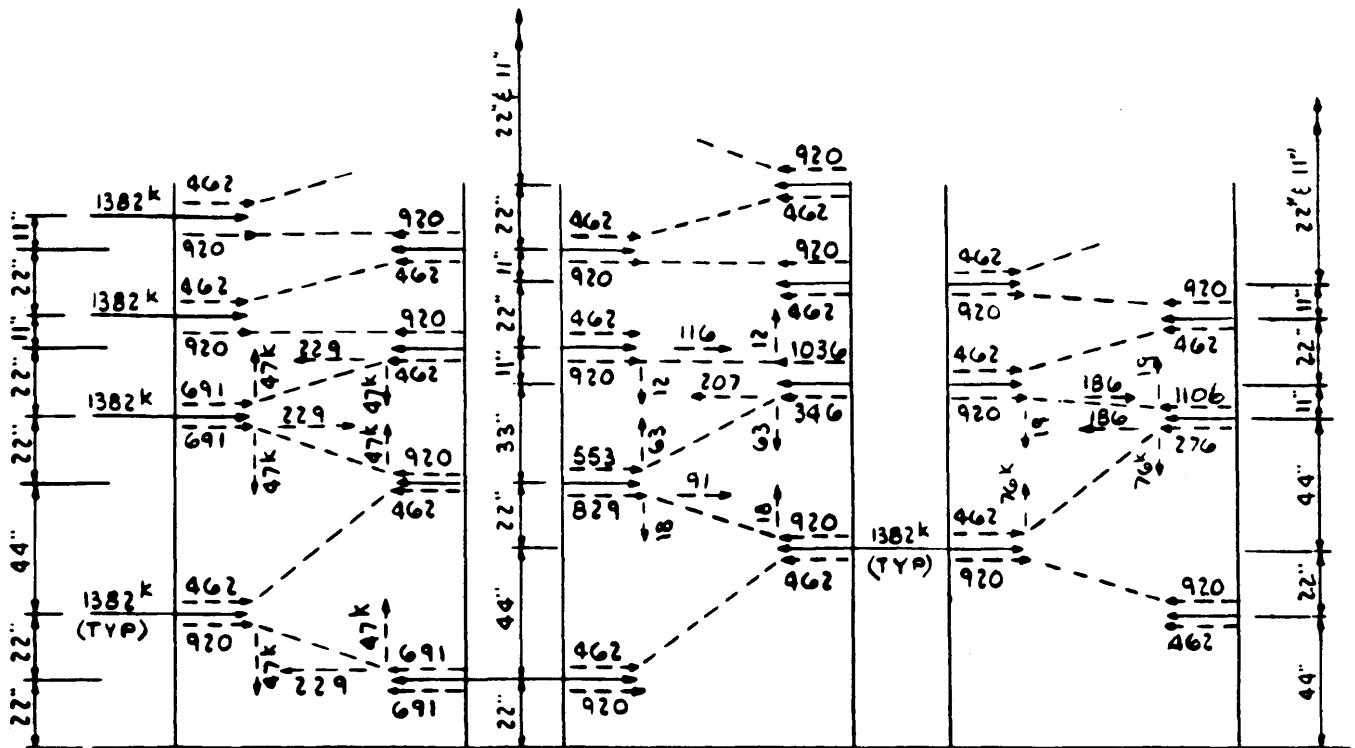
TMI Unit-1

Update - 1

7/82

Buttress-Vertical Bursting Stresses

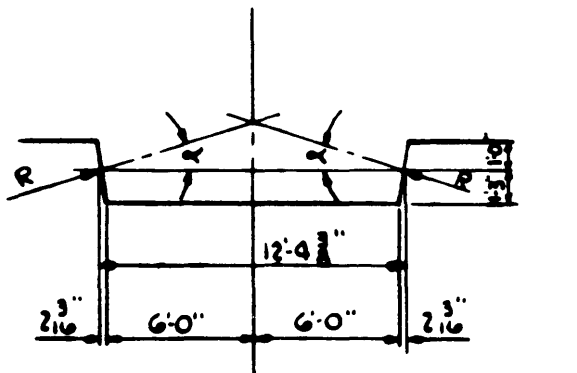
Fig. 5D-10



3, 6
BUTTRESS

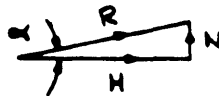
2, 5
BUTTRESS

1, 4
BUTTRESS



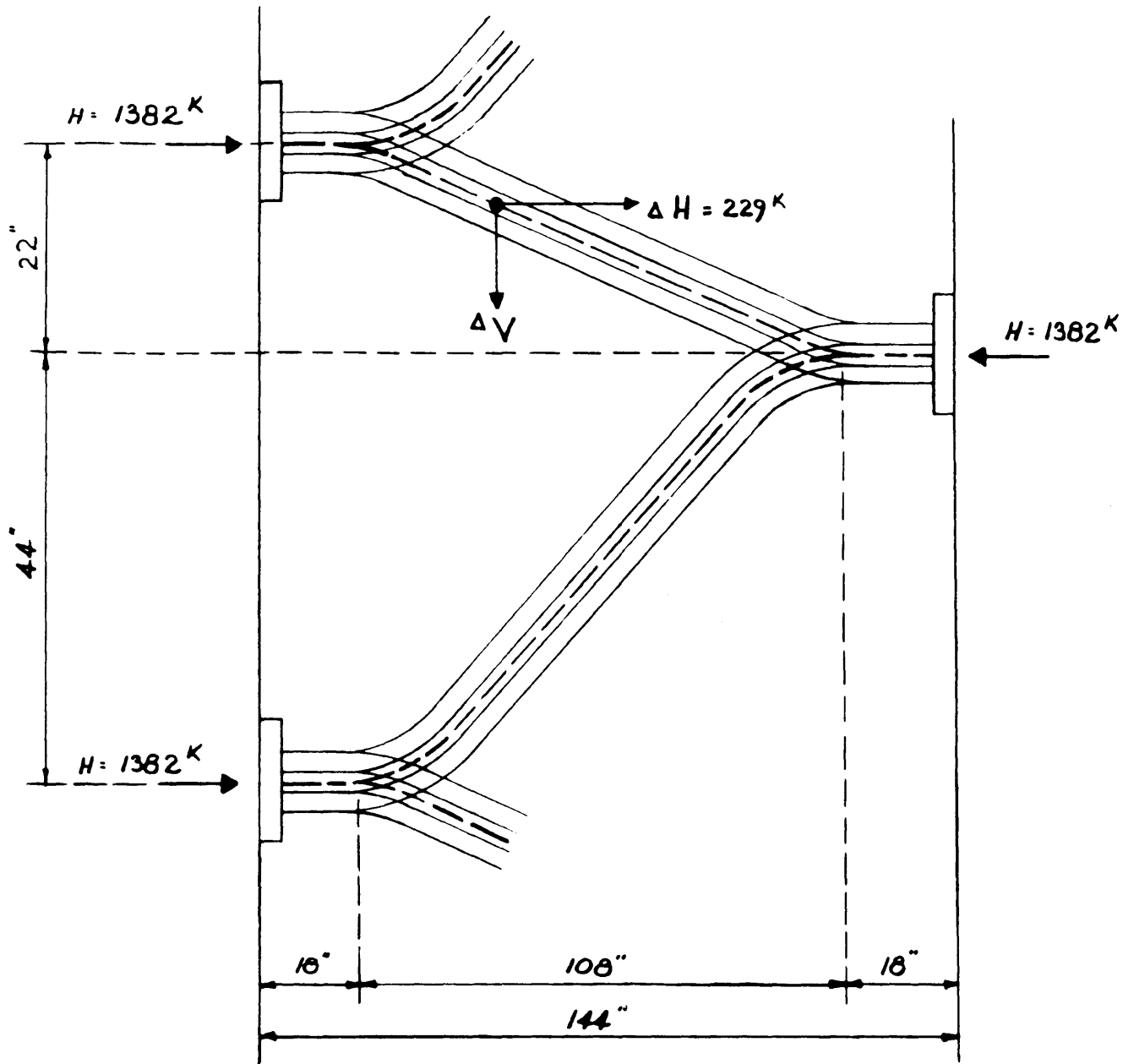
$\alpha = 8^{\circ}17'50''$

- R = 1400 k
- H = 1382 k
- N = 202 k



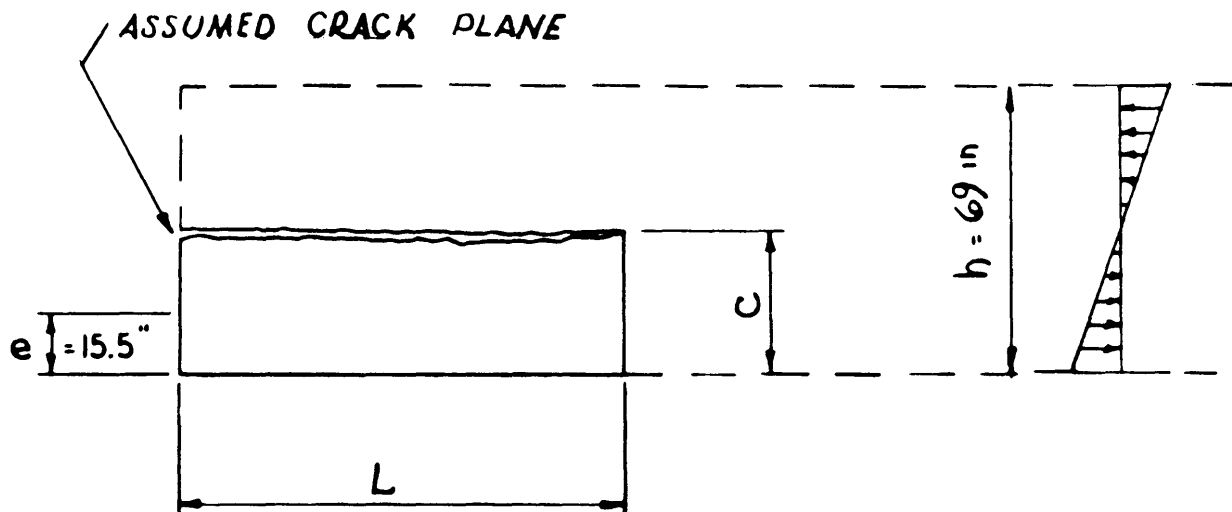
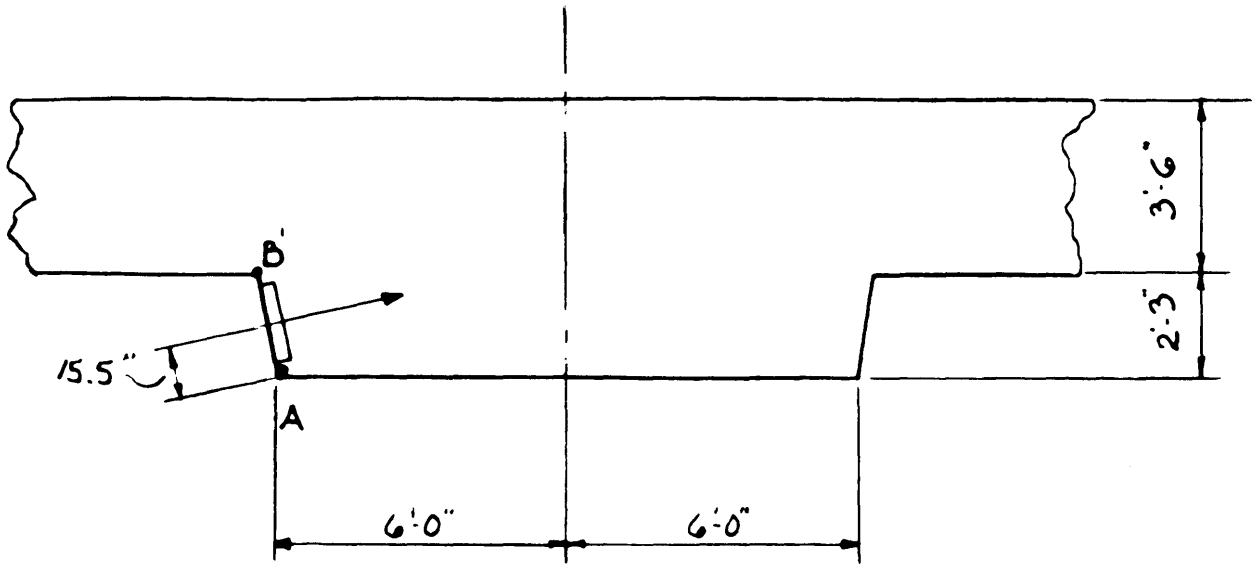
GPU Nuclear TMI Unit-1 Hoop Tendon Typical Anchor Force Distribution	Update - 1
	7/82
	Fig. 5D-11

$$\Delta V \cong 229 \left(\frac{22}{108} \right) \cong 47^K$$

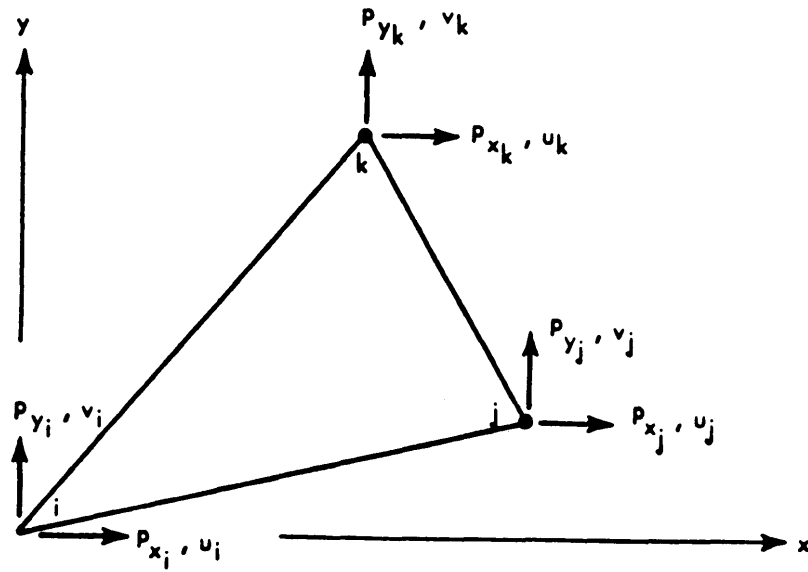


p. 5D.FIG-12

GPU Nuclear TMI Unit-1 Hoop Prestress Idealized Vertical Stress Flow in Buttress	Update -1
	7/82
Fig. 5D-12	

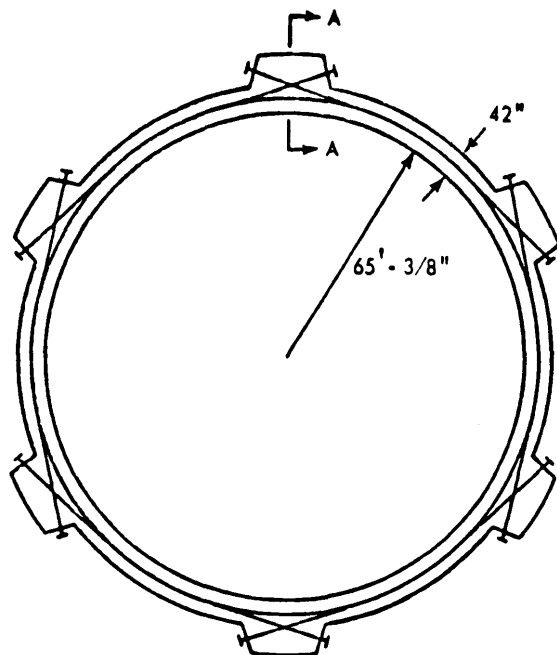


GPU Nuclear TMI Unit-1	Update - 1
	7/82
Idealized Model for Spalling	
Fig. 5D-13	

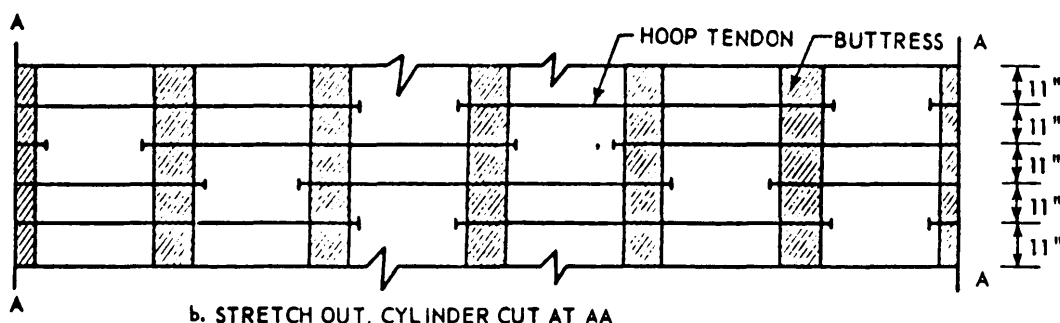


p. 5D.FIG-14

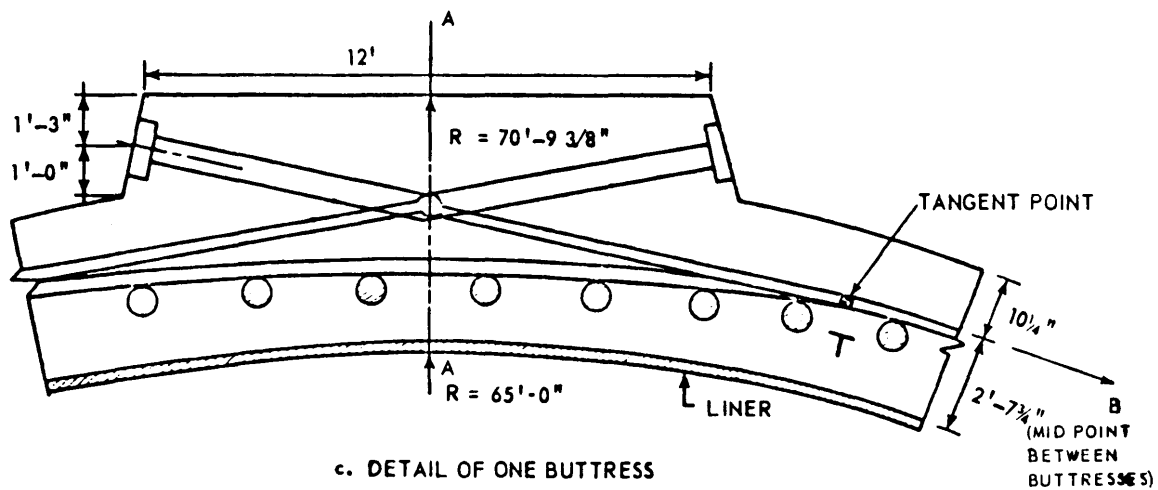
GPU Nuclear TMI Unit-1 A Triangular Plane Stress Finite-Element	Update - 1
	7/82
Fig. 5D-14	



a. A TYPICAL SECTION OF A CONTAINMENT VESSEL

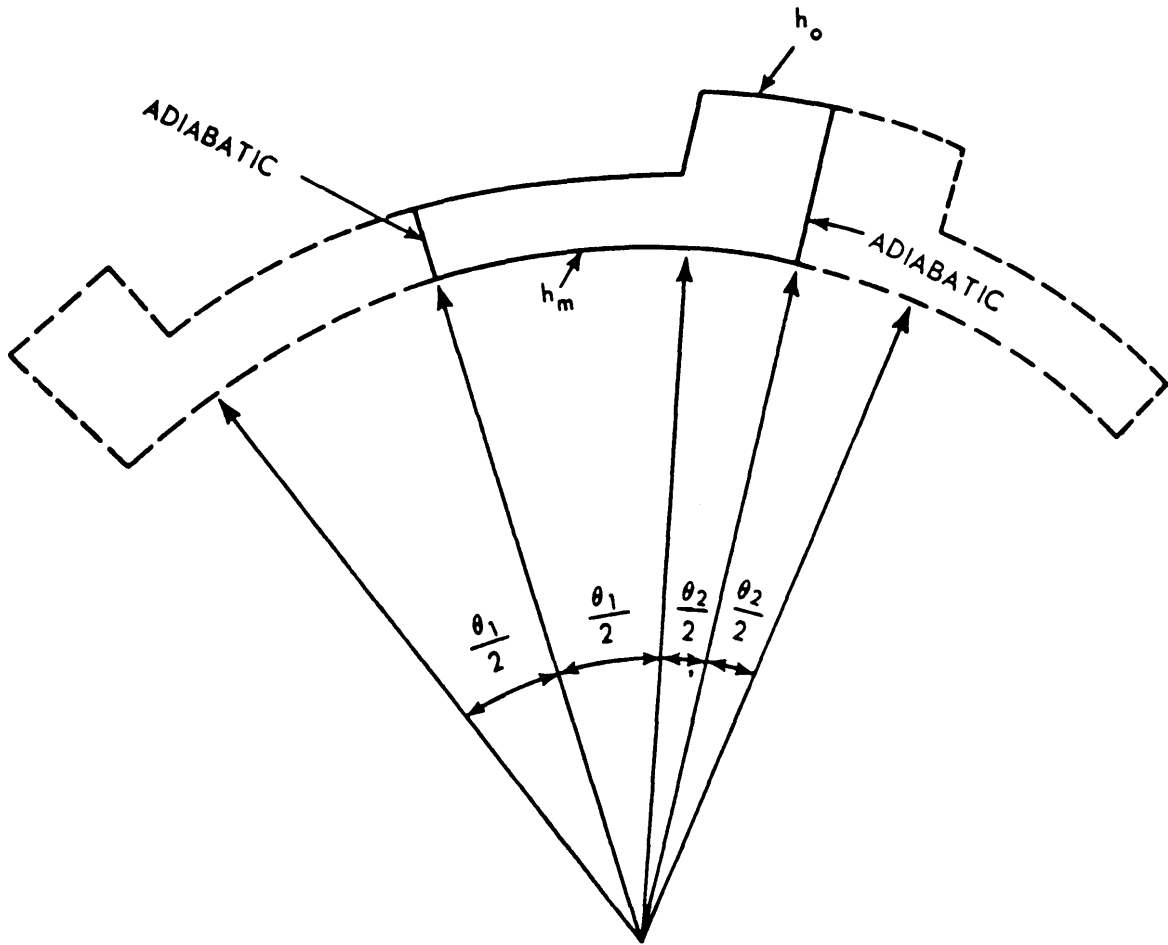


b. STRETCH OUT, CYLINDER CUT AT AA



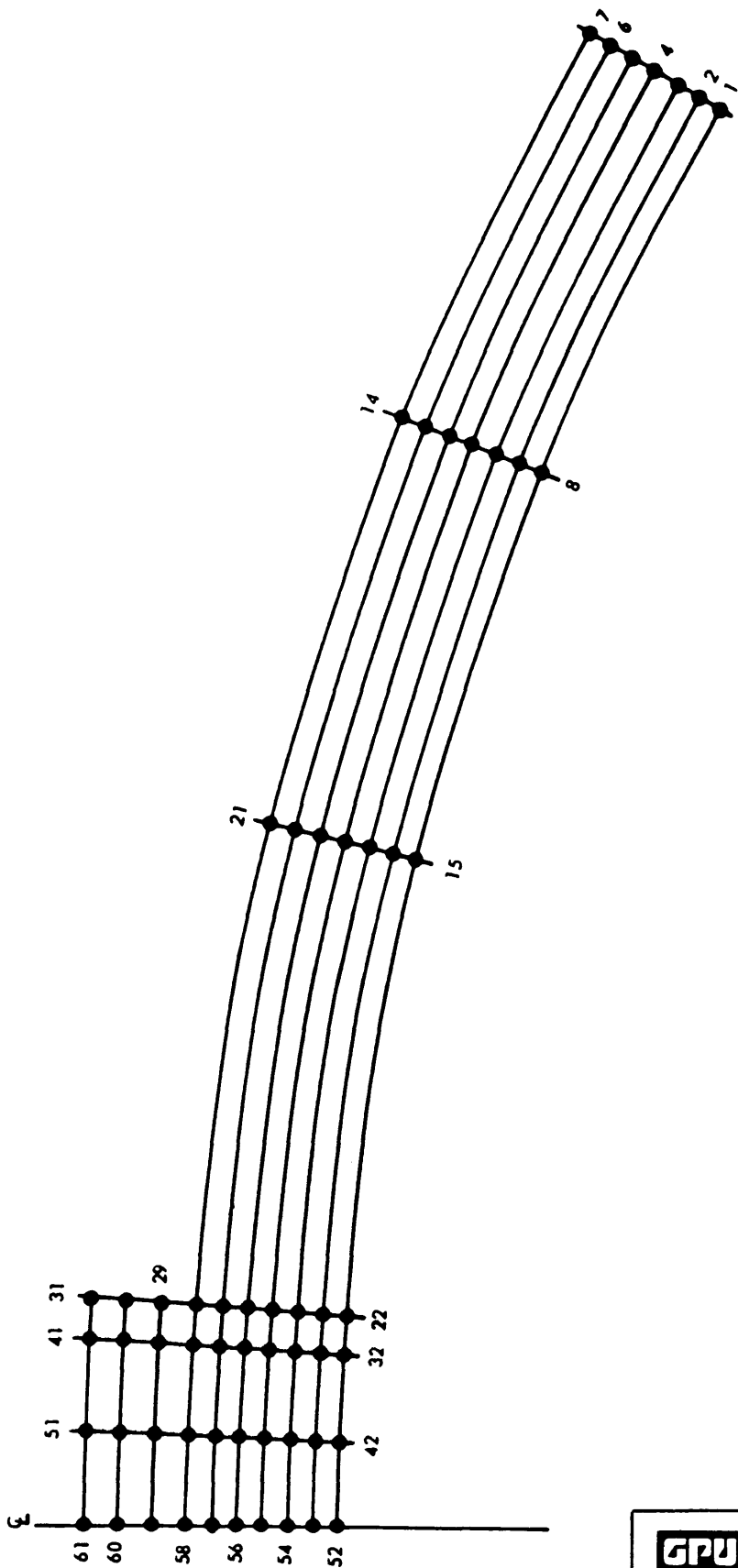
c. DETAIL OF ONE BUTTRESS

GPU Nuclear TMI Unit-1 Reactor Building with Buttresses	Update - 1
	7/82
	Fig. 5D-15



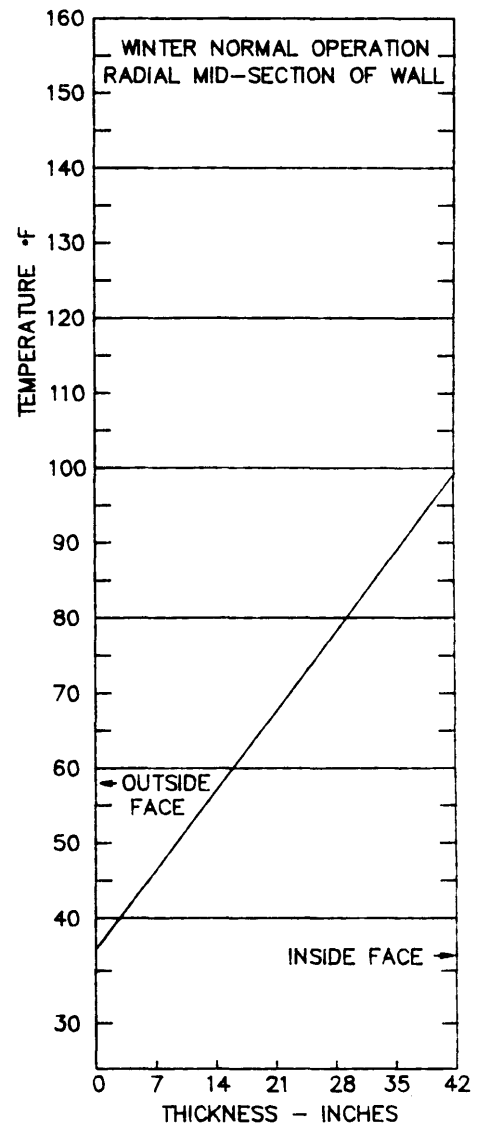
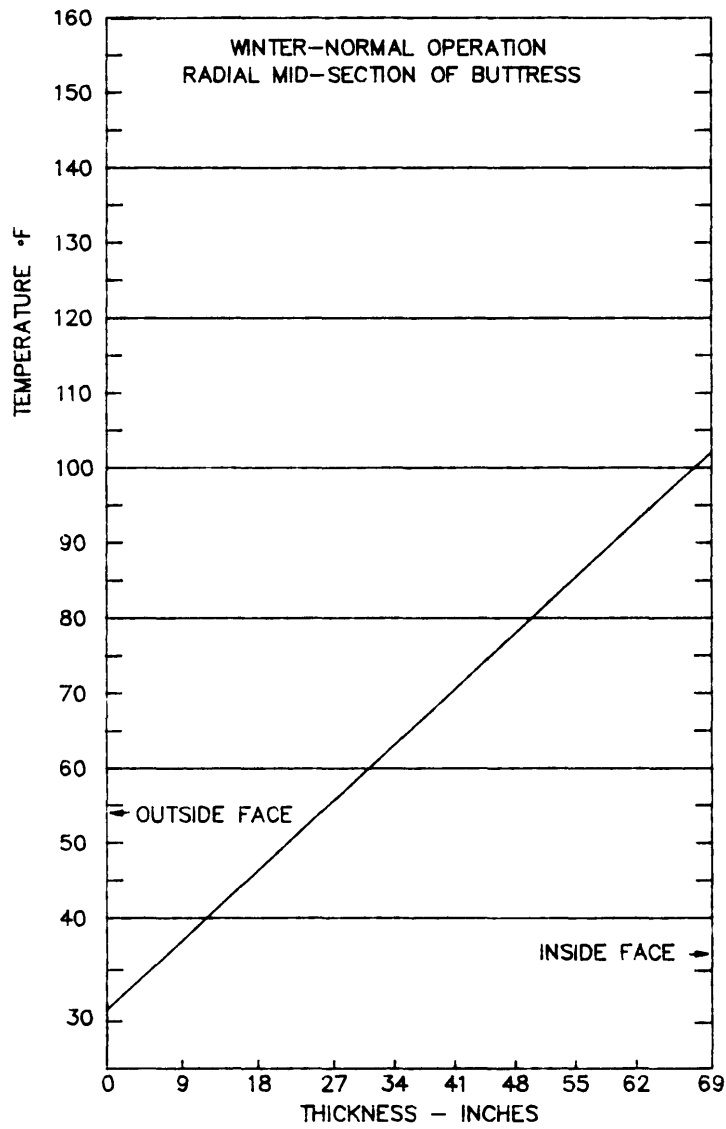
p. 5D.FIG-16

GPU Nuclear TMI Unit-1 Adiabatic Sections	Update - 1
	7/82
	Fig. 5D-16



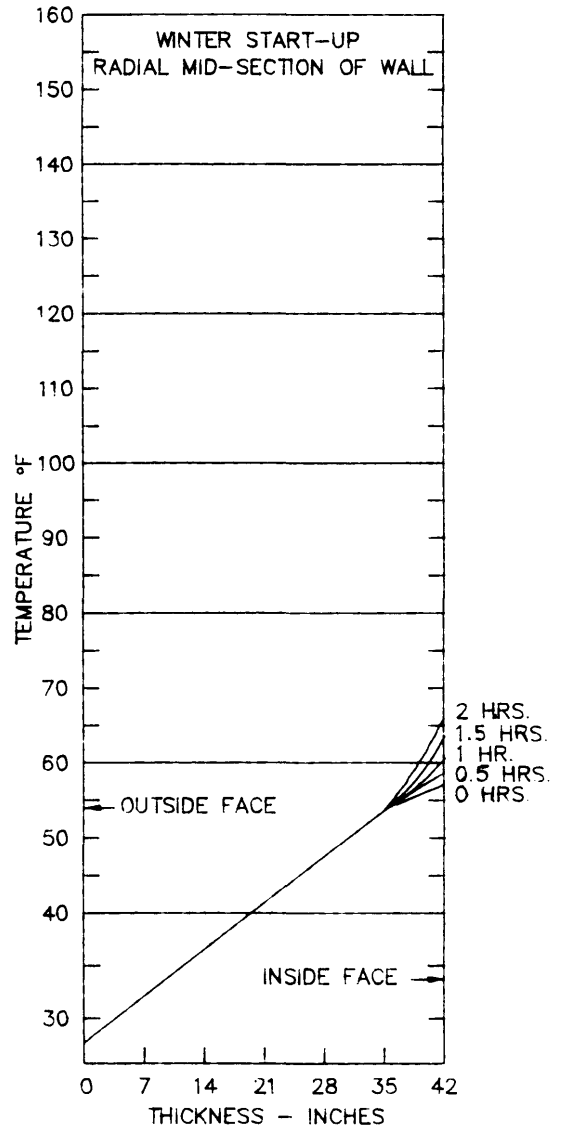
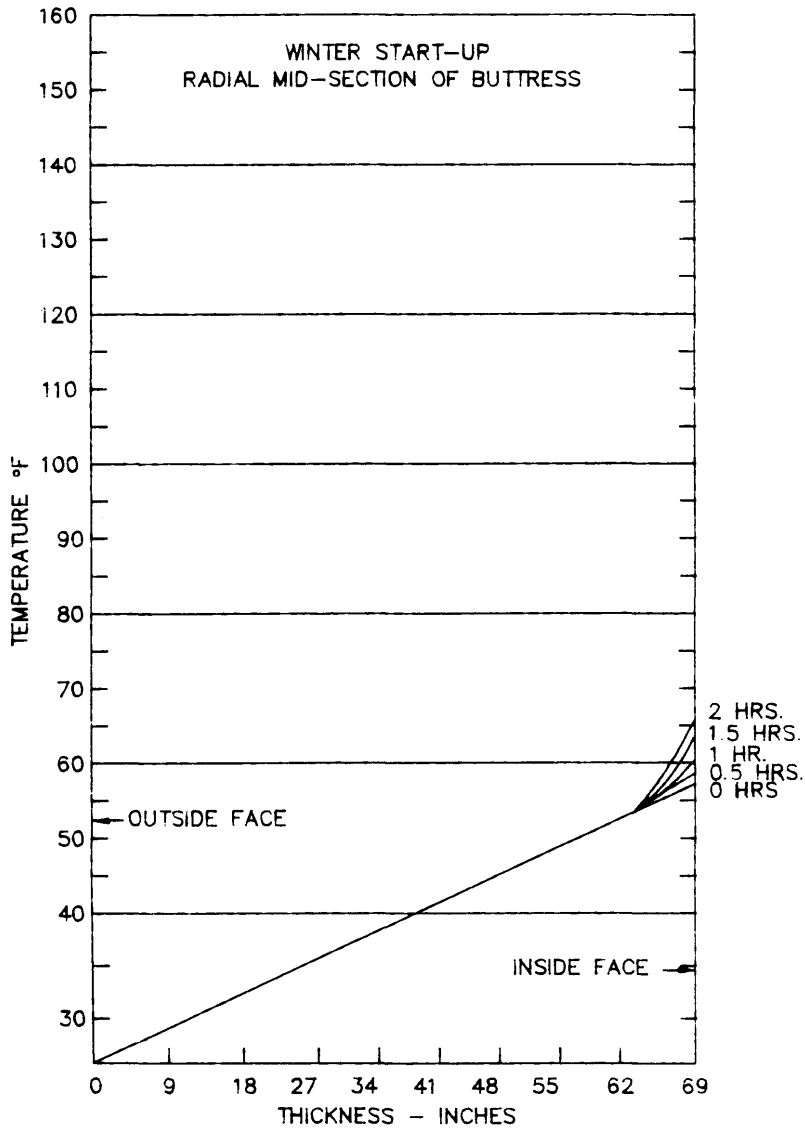
p. 5D.FIG-17

GPU Nuclear TMI Unit-1 Model of Gridwork for Thermal Analysis	Update - 1
	7/82
Fig. 5D-17	



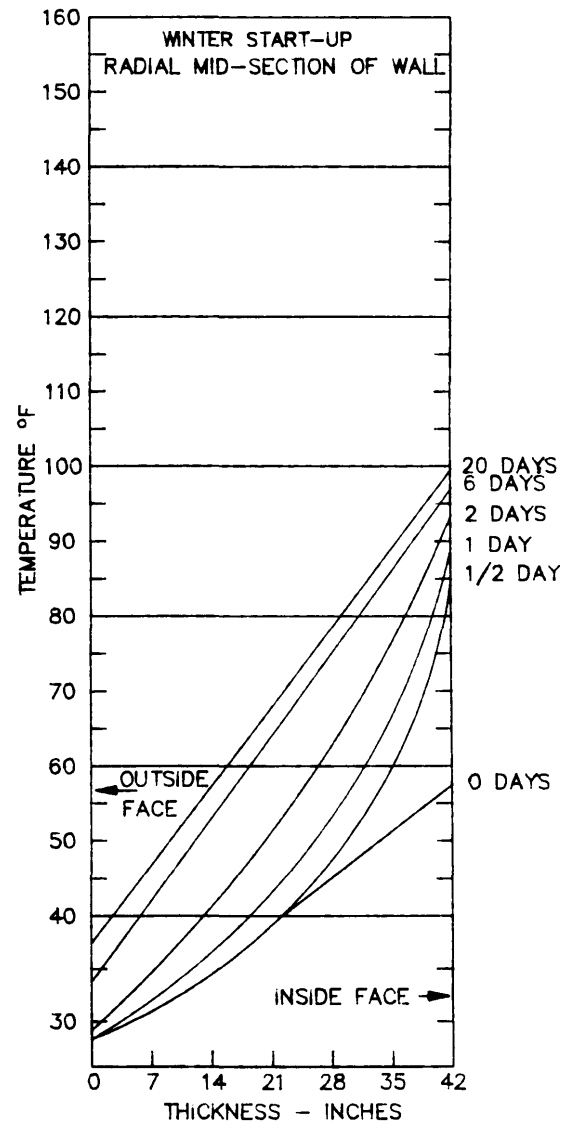
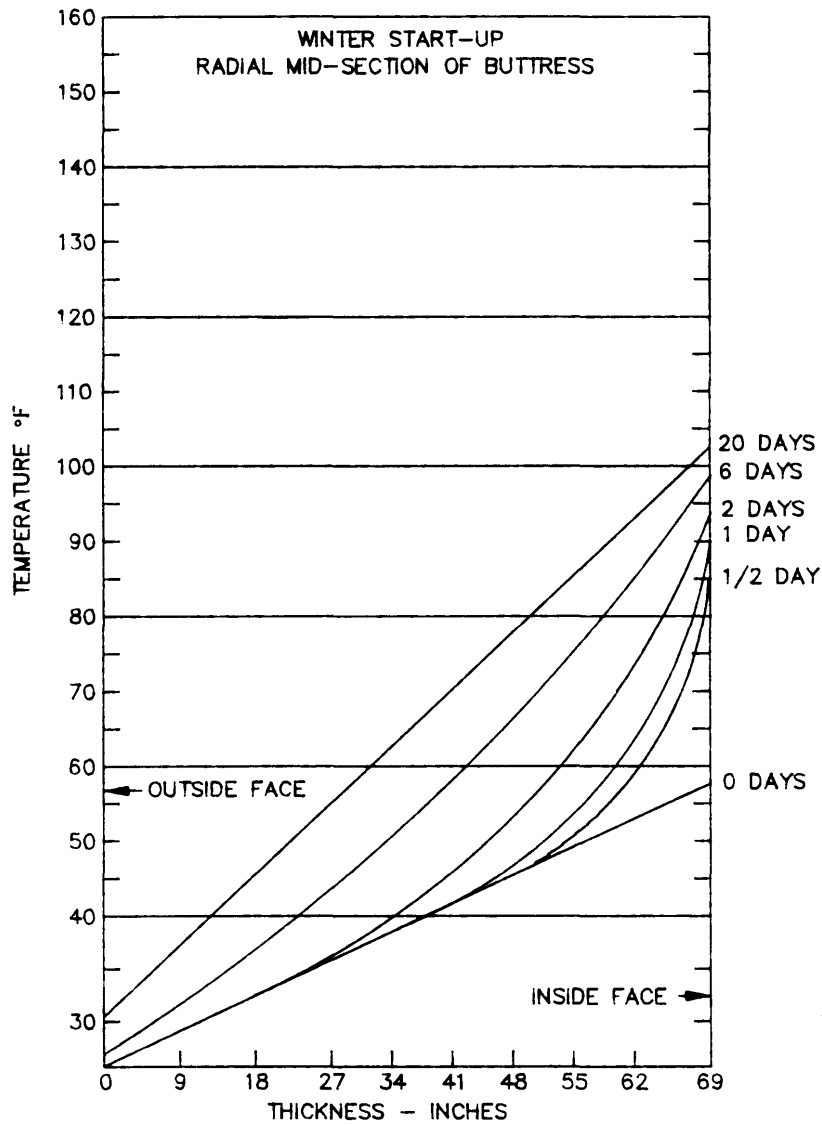
p. 5D.FIG-18

GPU Nuclear	Update - 1
	7/82
TMI Unit-1	
Temperature Profiles through Wall and Butress for Various Thermal Load Conditions	
C.F. # 1ASKM167	Sheet 1 of 5 Fig. 5D-18



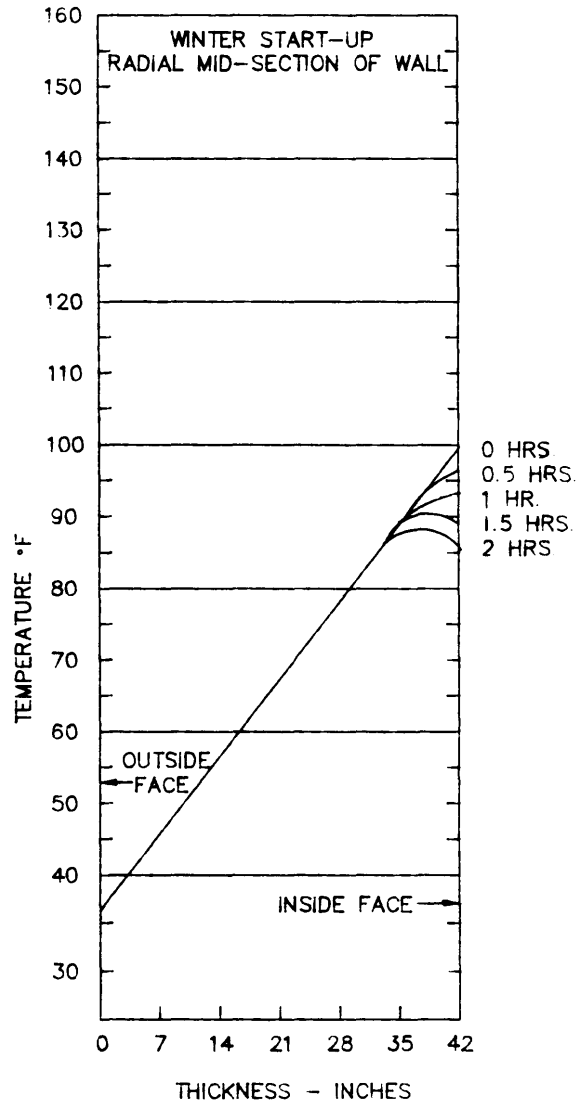
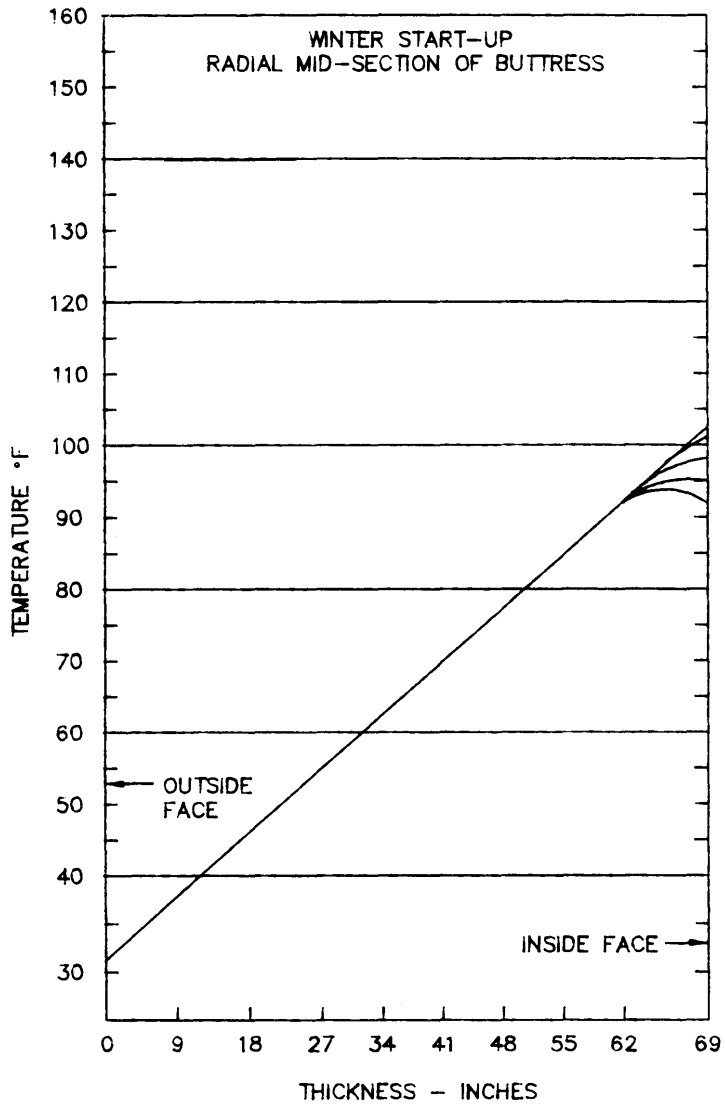
p. 5D.FIG-19

GPU Nuclear	Update - 1
TMI Unit-1	7/82
Temperature Profiles through Wall and Buttress for Various Thermal Load Conditions	
C.F. # 1ASKM168	Sheet 2 of 5 Fig. 5D-18



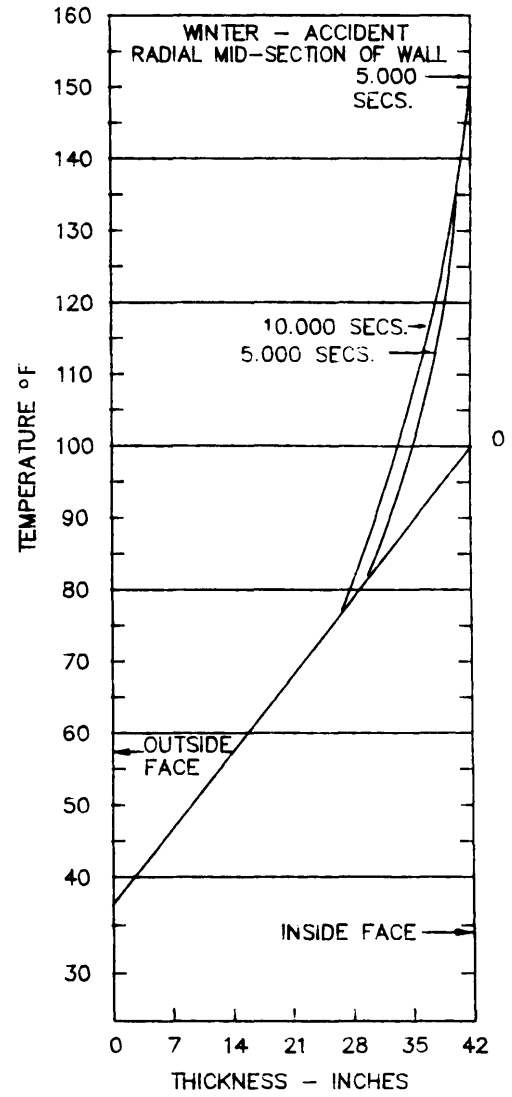
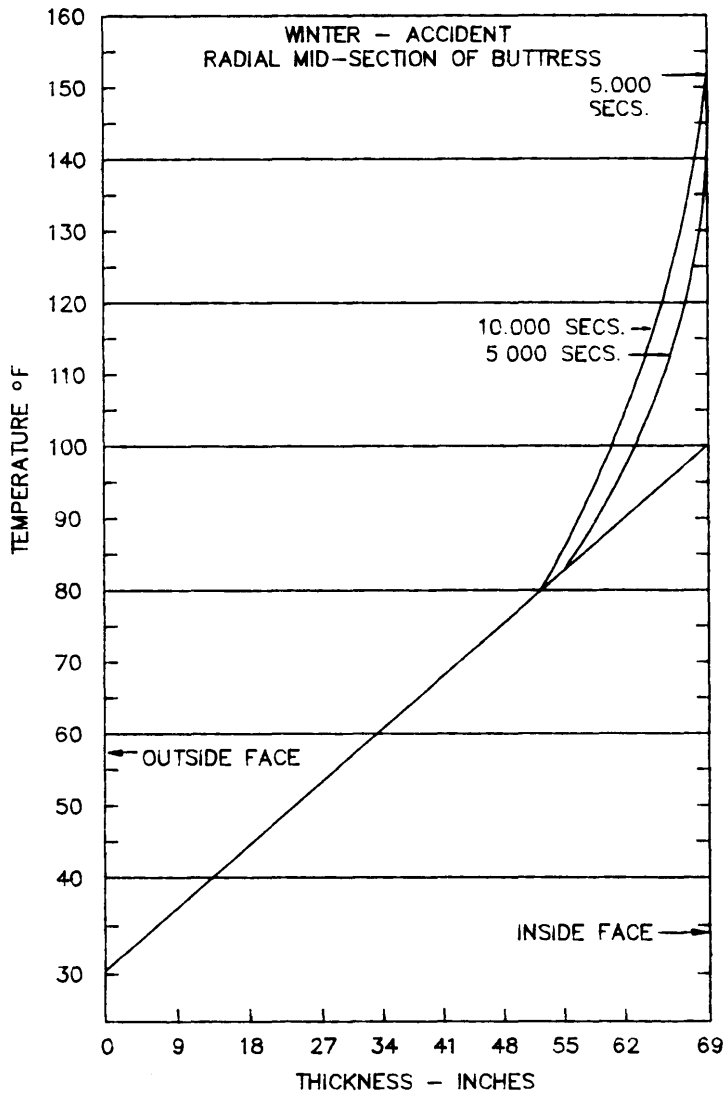
p. 5D.FIG-20

GPU Nuclear TMI Unit-1 Temperature Profiles through Wall and Buttress for Various Thermal Load Conditions C.F. # 1ASKM169	Update - 1
	7/82
	Sheet 3 of 5
	Fig. 5D-18



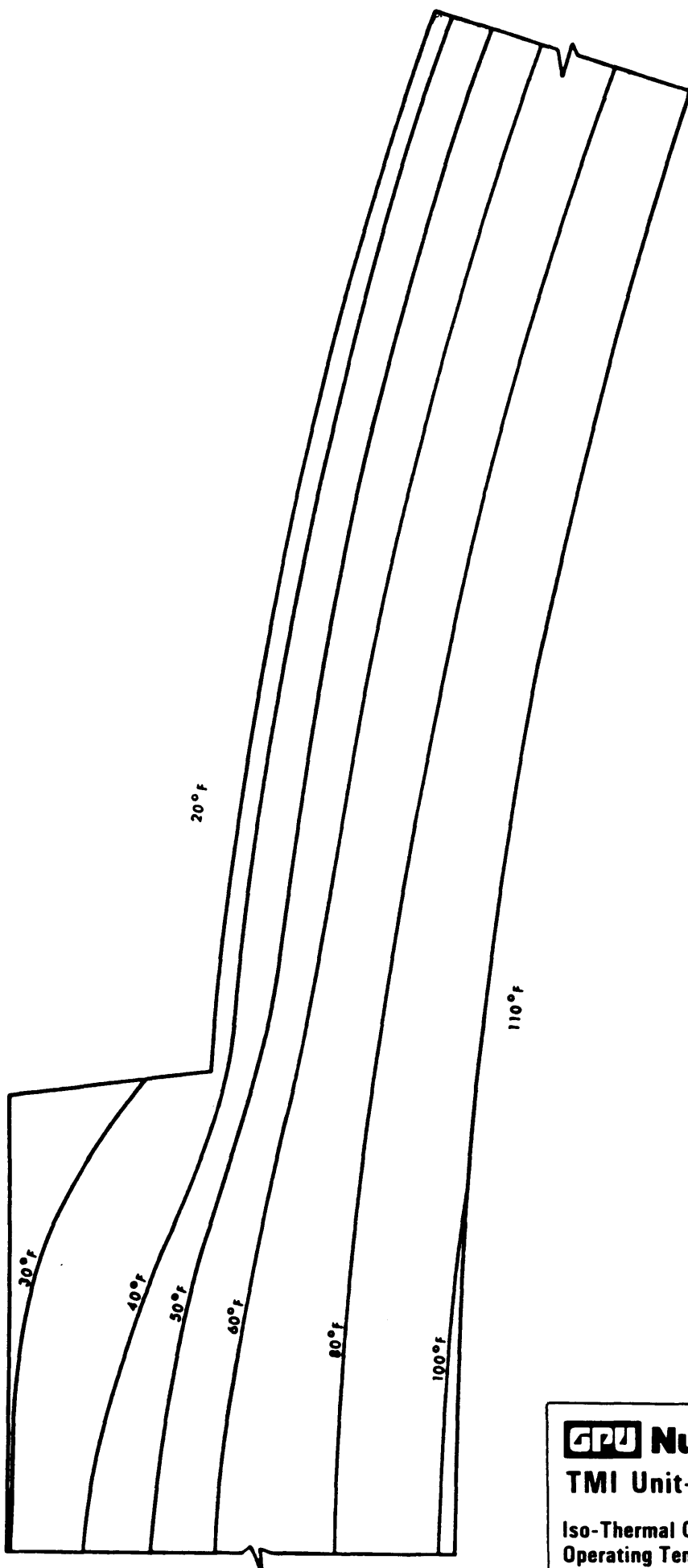
p. 5D.FIG-21

GPU Nuclear	Update - 1
TMI Unit-1	7/82
Temperature Profiles through Wall and Buttress for Various Thermal Load Conditions	
C.F. # 1ASKM170	Sheet 4 of 5 Fig. 5D-18



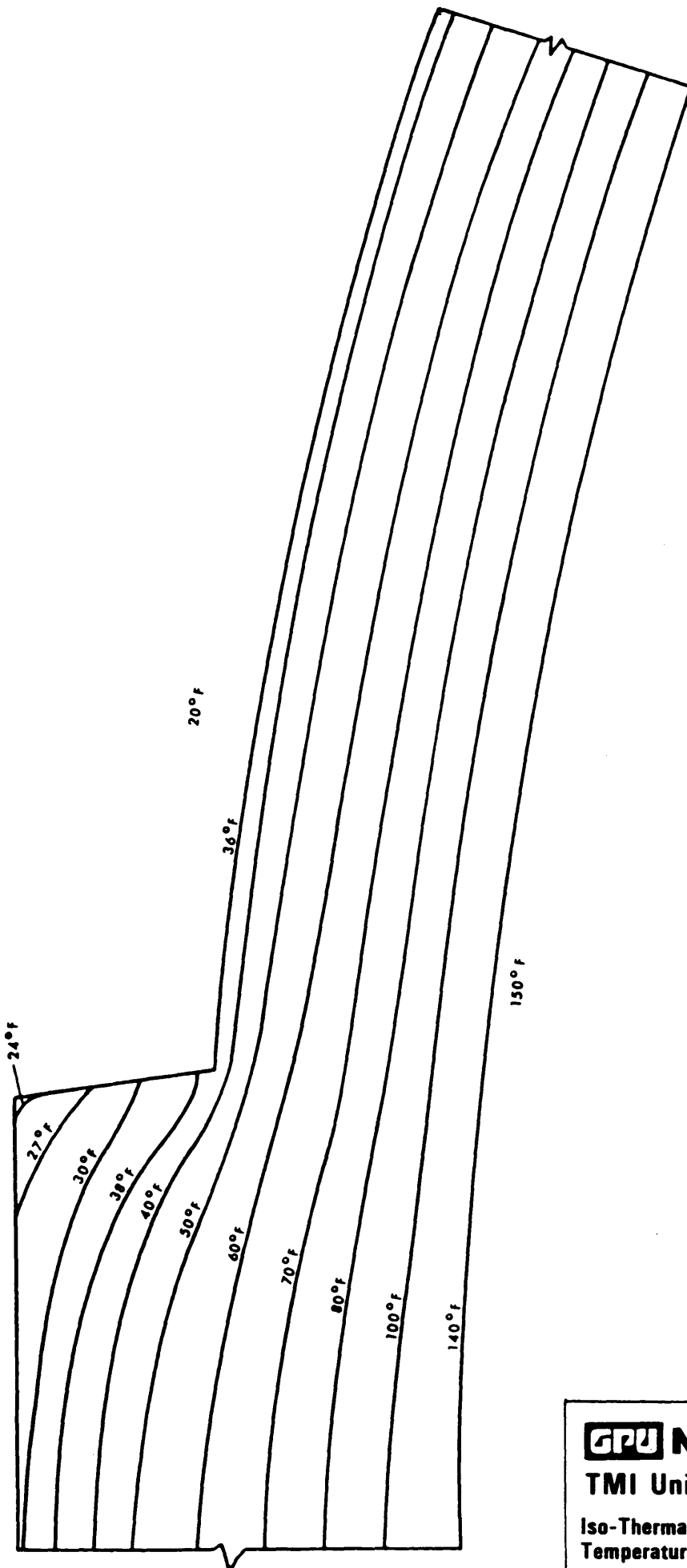
p. 5D.FIG-22

GPU Nuclear	Update - 1
TMI Unit-1	7/82
Temperature Profiles through Wall and Buttress for Various Thermal Load Conditions	
C.F. # 1ASKM171	Sheet 5 of 5 Fig. 5D-18



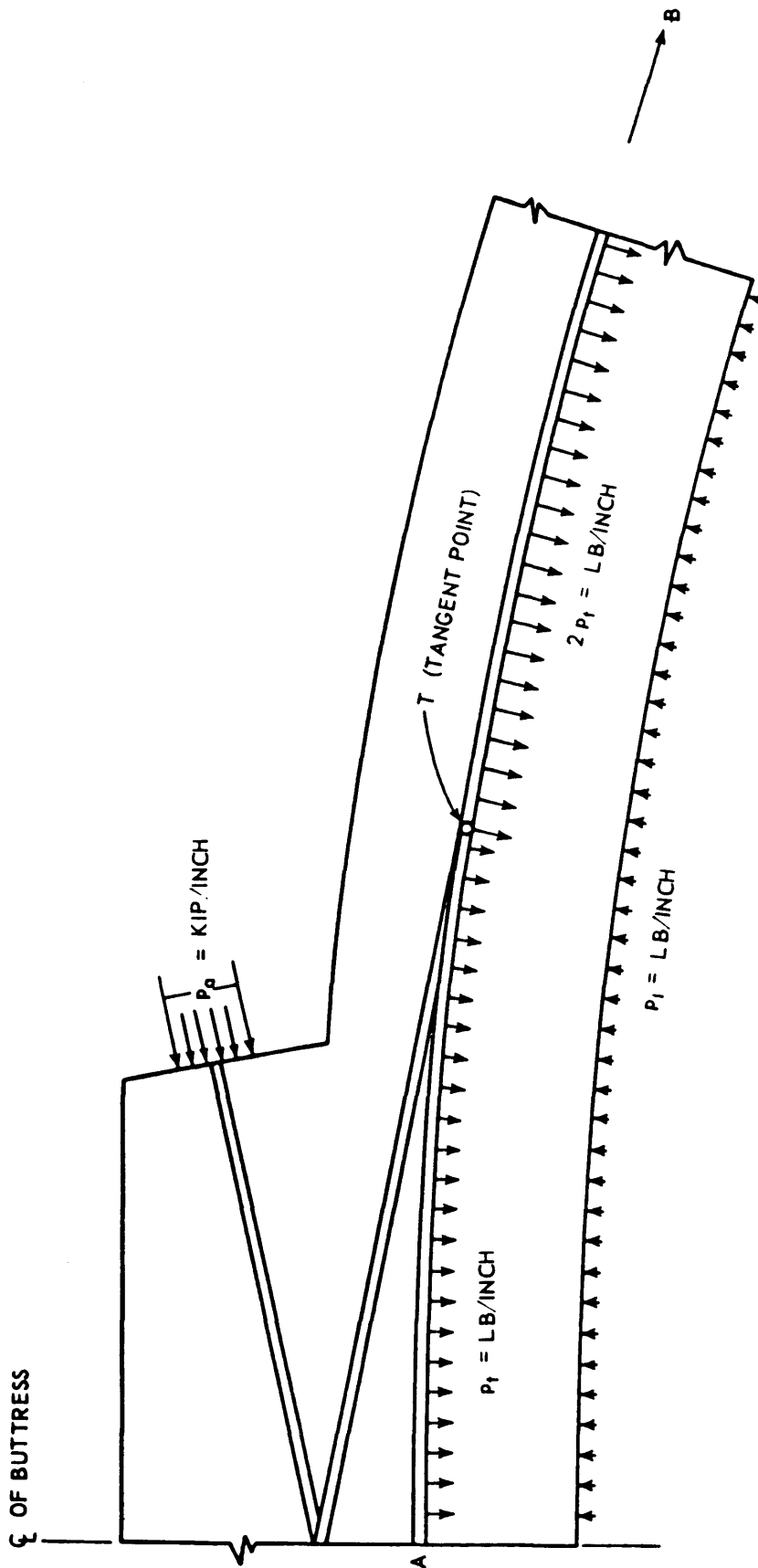
p. 5D.FIG-23

GPU Nuclear	Update - 1
TMI Unit-1	7/82
Iso-Thermal Curves for Winter Normal Operating Temperature Condition	
Fig. 5D-19	



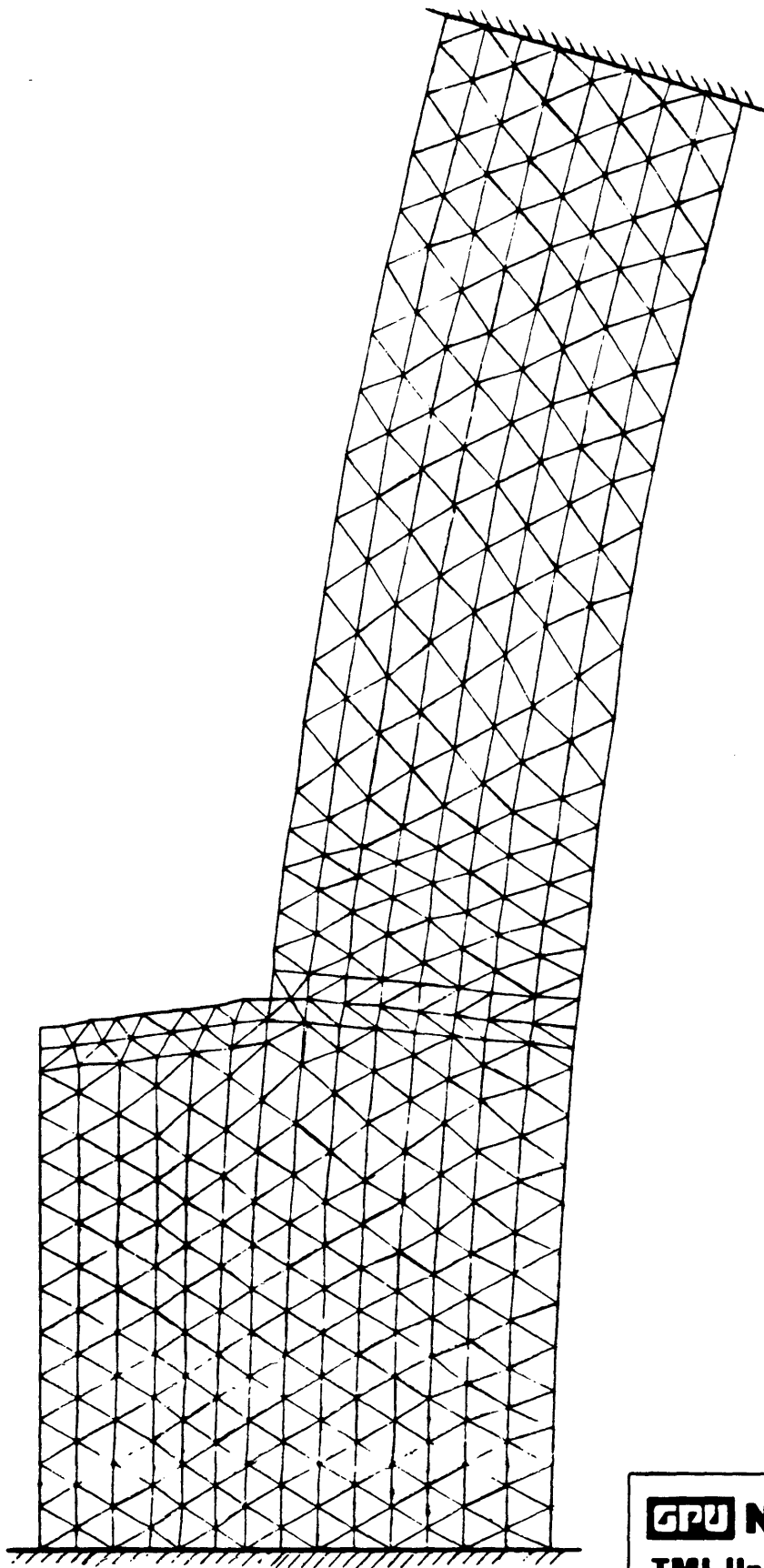
p. 5D.FIG-24

GPU Nuclear TMI Unit-1	Update -1
	7/82
Iso-Thermal Curves for Winter Accident Temperature Condition at Time = 10,000 Secs.	
Fig. 5D-20	



p. 5D.FIG-25

GPU Nuclear TMI Unit-1 The Hoop Tendon Loads, Internal Pressure and the Equivalent Liner Pressure	Update - 1
	7/82
Fig. 5D-21	



GPU Nuclear

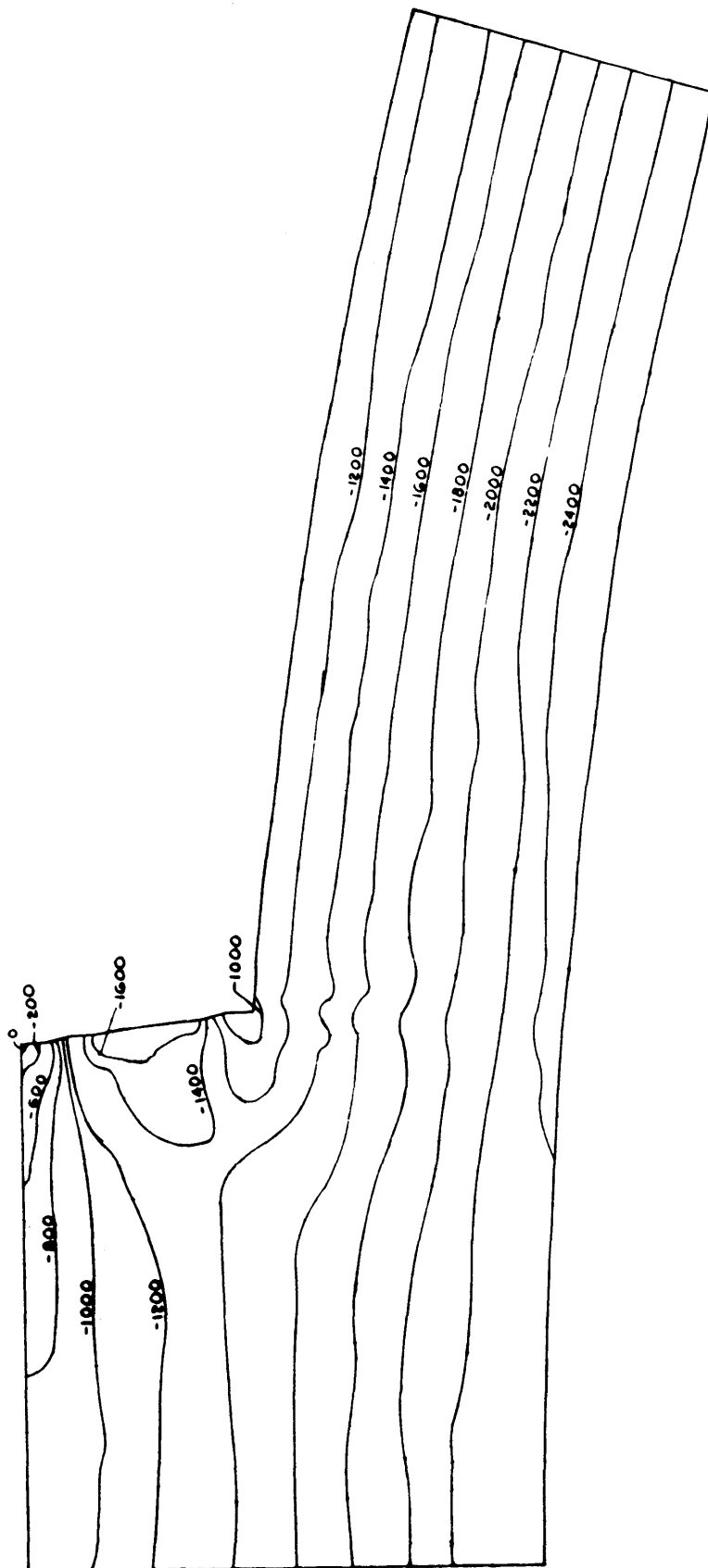
TMI Unit-1

**Finite-Element Grid Work
for Buttress Analysis**

Update - 1

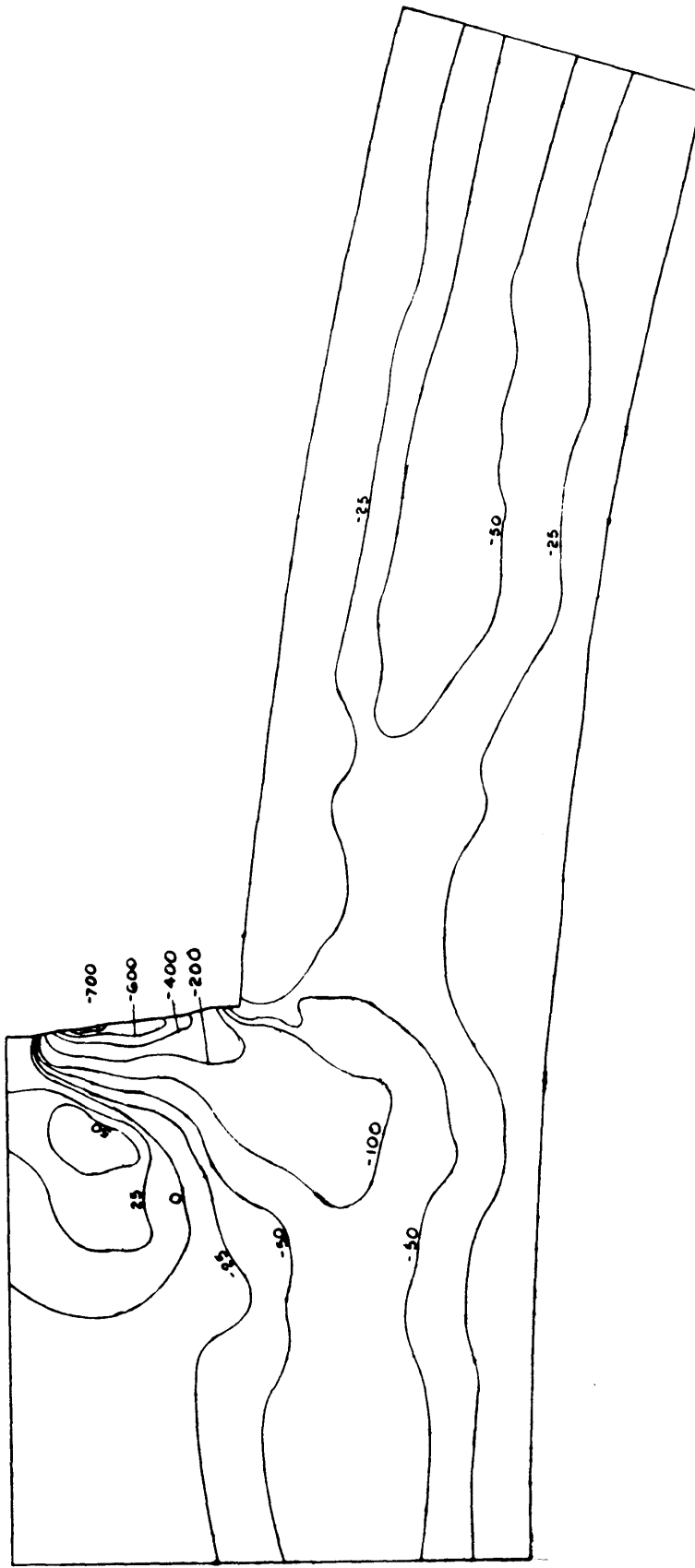
7/82

Fig. 5D-22



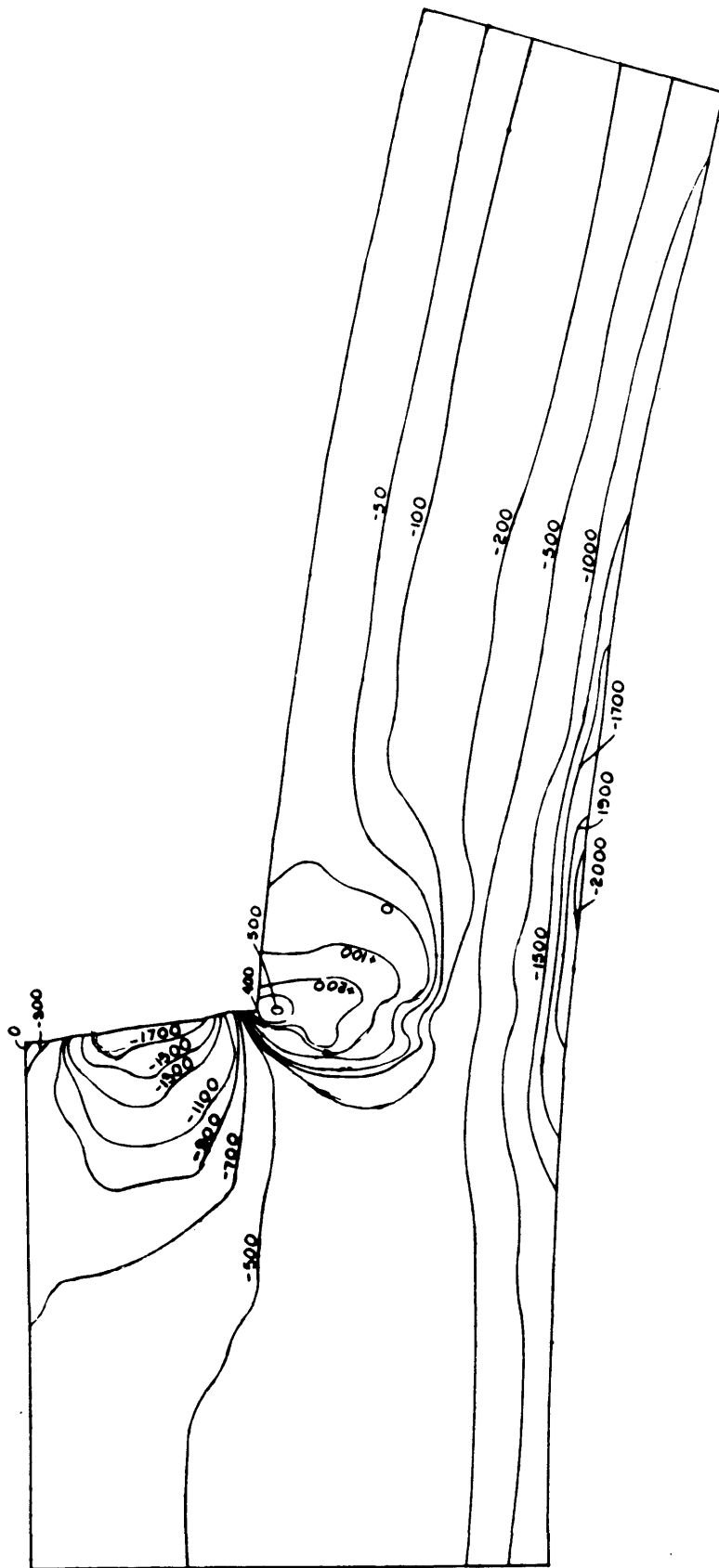
p. 5D.FIG-27

GP Nuclear TMI Unit 1	Update - 1
	7/82
Minimum Principal Stresses for Maximum Prestress Forces and Winter Normal Operating Condition (Case A)(PSI)	
Fig. 5D-23	



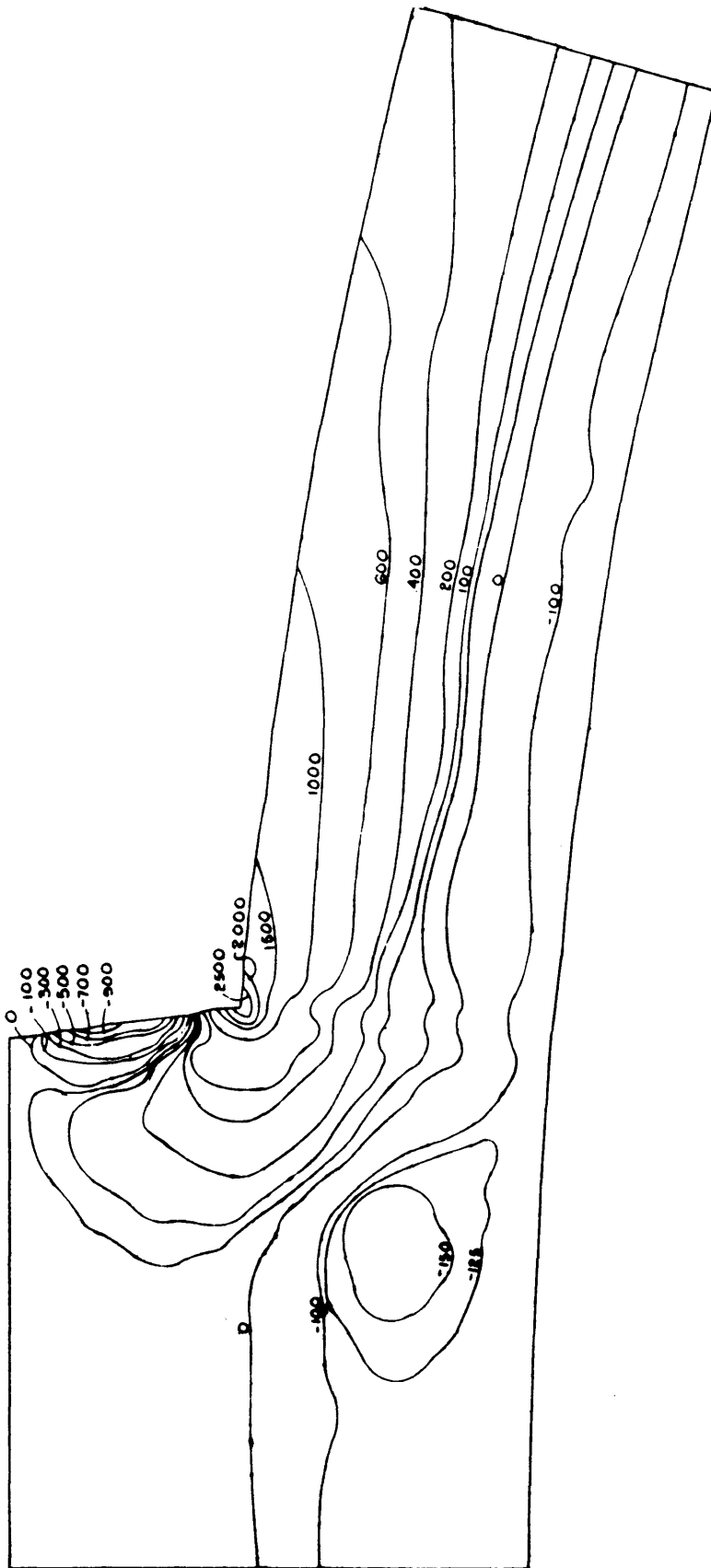
p. 5D.FIG-28


GPU Nuclear TMI Unit-1 Maximum Principal Stresses for Maximum Prestress Forces and Winter Normal Operating Condition (Case A) (PSI)	Update - 1
	7/82
	Fig. 5D-24

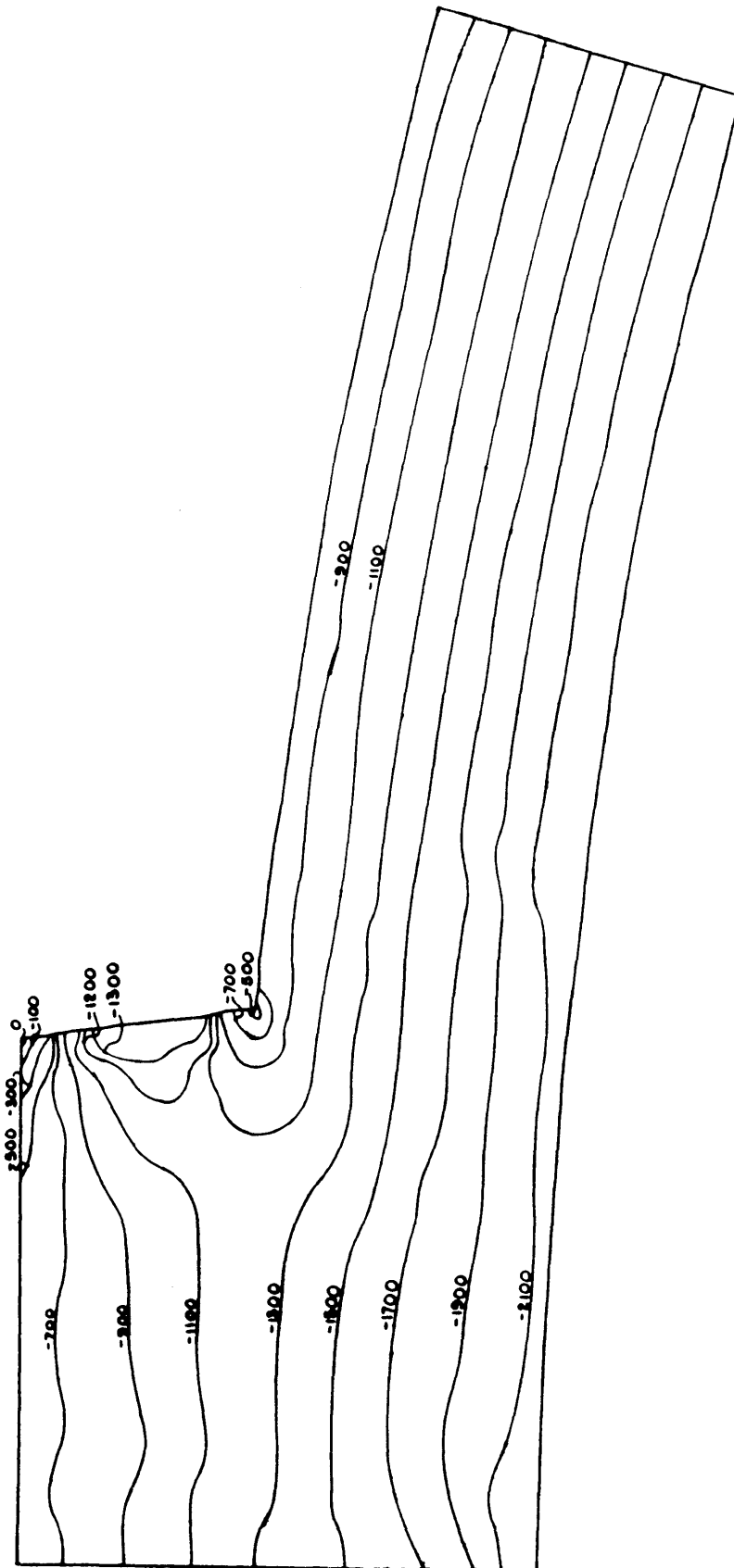


p. 5D.FIG-29

GPU Nuclear	Update - 1
TMI Unit-1	7/82
Minimum Principal Stresses for Maximum Prestress Forces and Winter Accident Condition (Case B) (PSI)	
Fig. 5D-25	

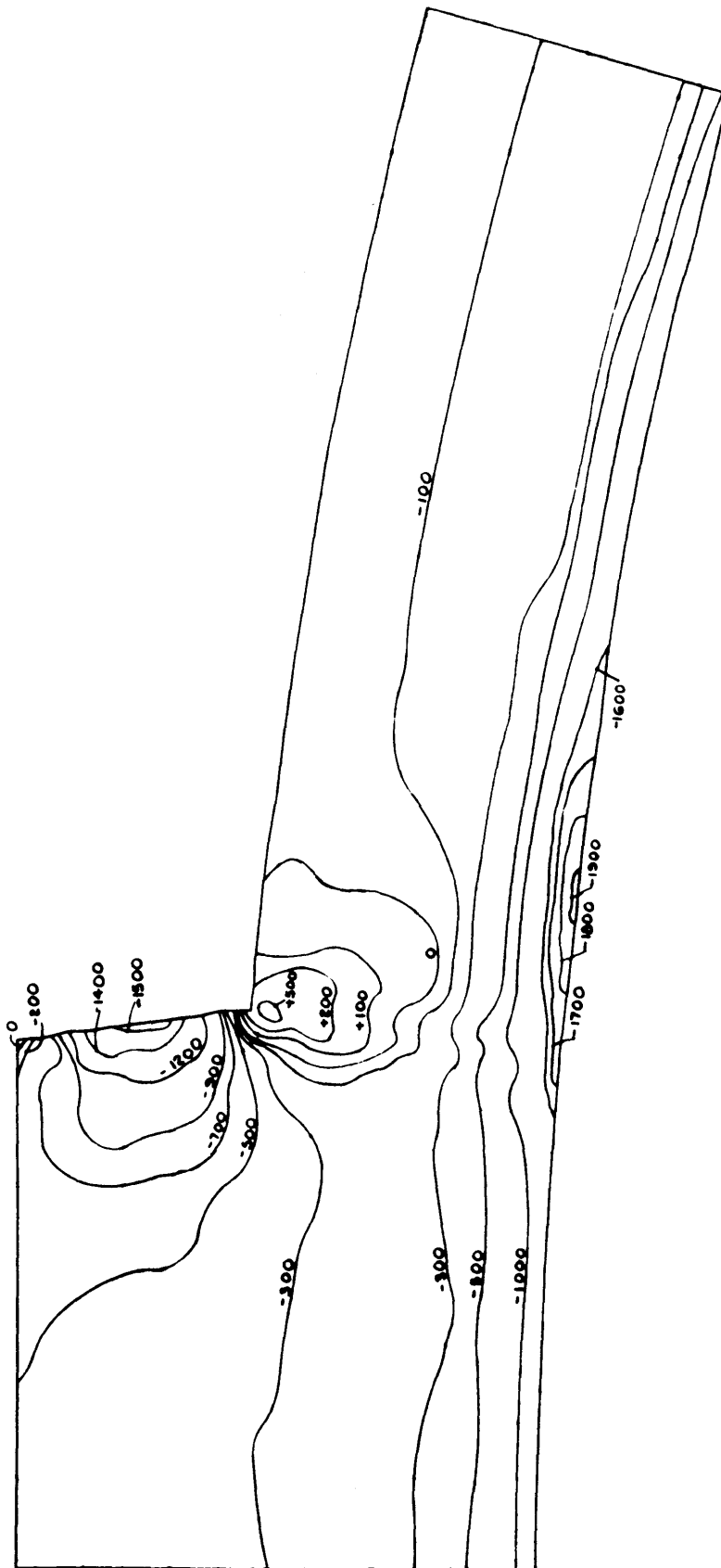


 Nuclear	Update - 1
	7/82
TMI Unit-1	
Maximum Principal Stresses for Maximum Prestress Forces and Winter Accident Condition (Case B) (PSI)	
	Fig. 5D-26



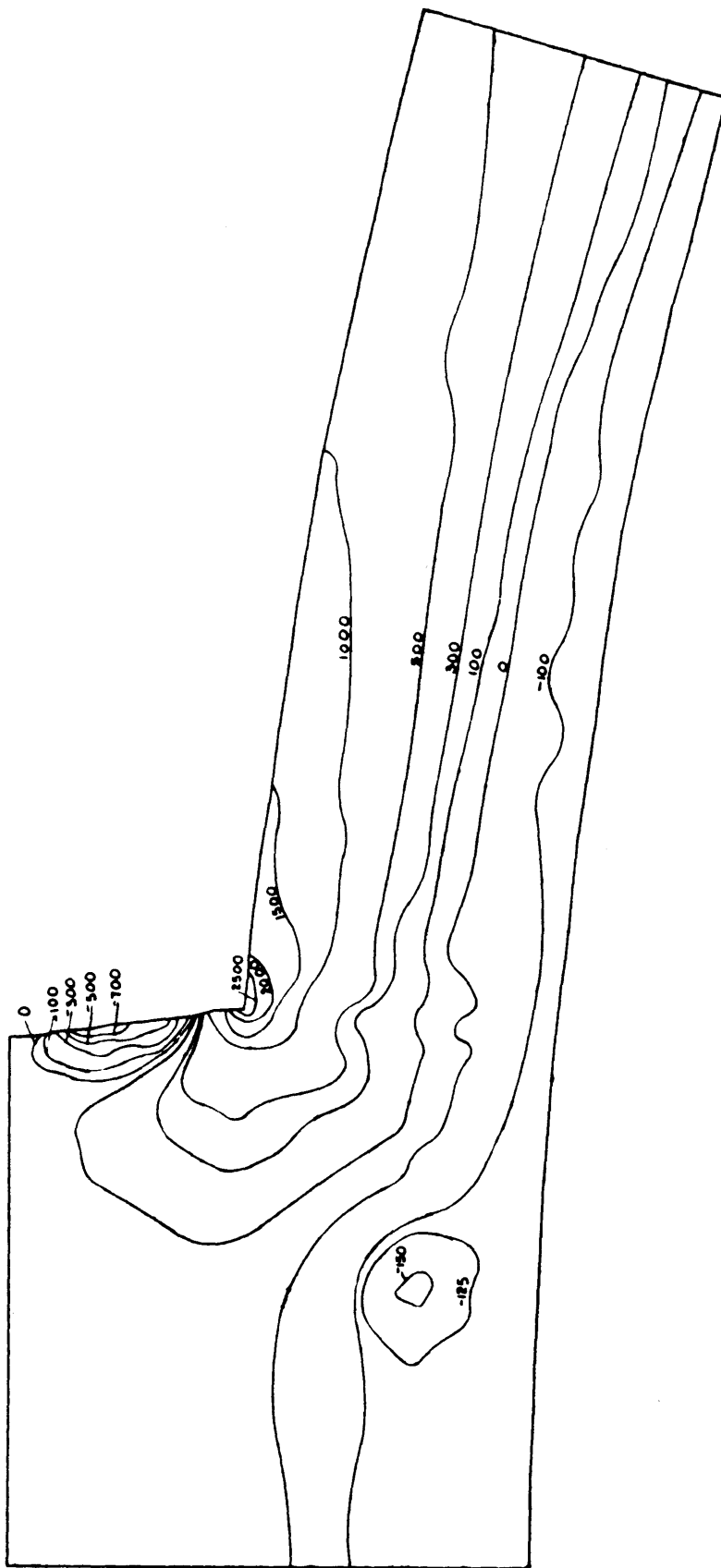
p. 5D.FIG-31

GPU Nuclear TMI Unit-1 Minimum Principal Stresses for Minimum Prestress Forces and Winter Normal Operating Condition (Case C) (PSI)	Update - 1
	7/82
Fig. 5D-27	



p. 5D.FIG-33

GPU Nuclear	Update - 1
TMI Unit-1	7/82
Minimum Principal Stresses for Minimum Prestress Forces and Winter Accident Condition (Case D) (PSI)	
	Fig. 5D-29



GPU Nuclear TMI Unit-1 Maximum Principal Stresses for Minimum Prestress Forces and Winter Accident Condition (Case D) (PSI)	Update - 1
	7/82
	Fig. 5D-30