

\* Piping is disconnected from the vessel head, and the head nozzle and piping are blind flanged or capped.

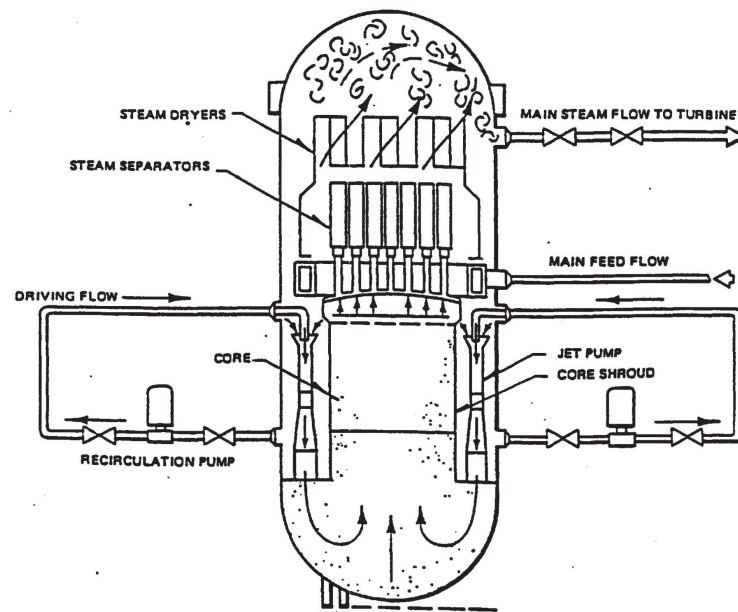
\*\* Steam Dryer shown reflects original steam dryer.

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REACTOR VESSEL INTERNALS

FIGURE 3.3.1

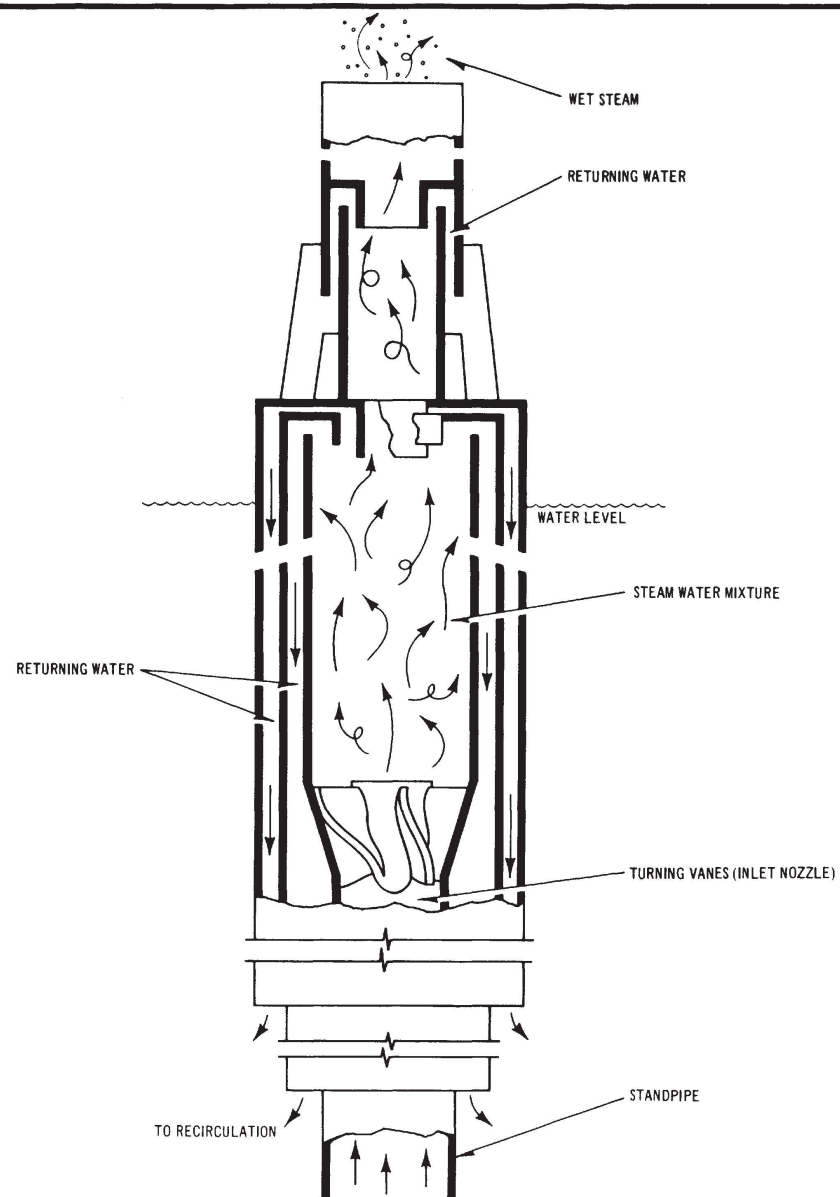
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REACTOR VESSEL INTERNAL FLOW  
SCHEMATIC

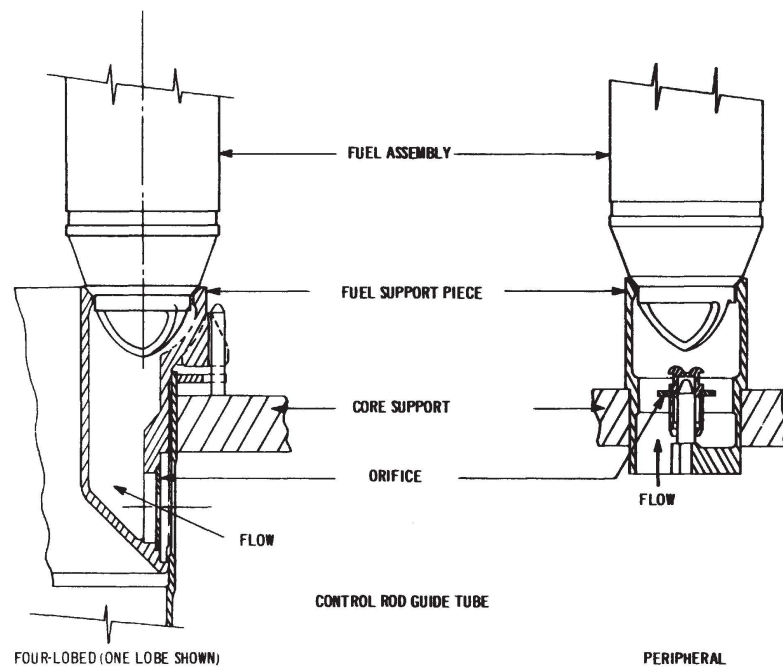
FIGURE 3.3.2 REV. 14 05/97



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STEAM SEPARATOR

FIGURE 3.3.3

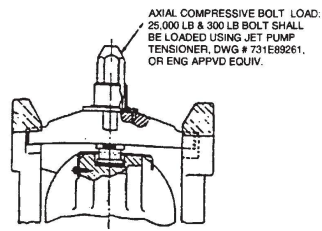


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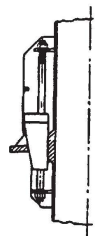
FUEL SUPPORT PIECES

FIGURE 3.3.4

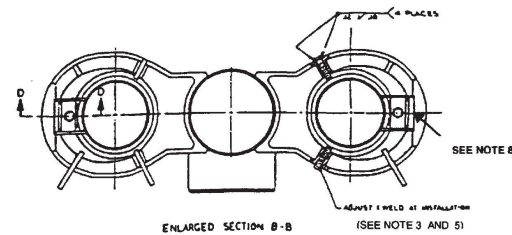
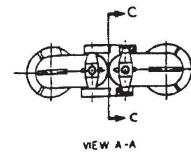
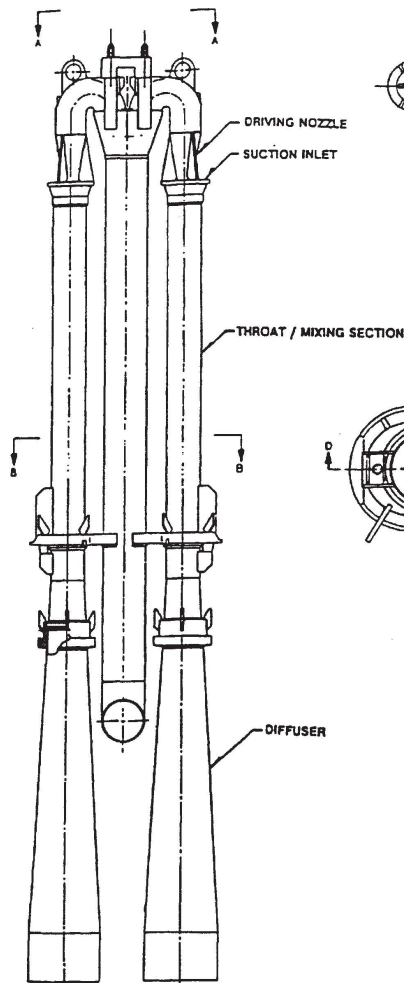




ENLARGED VIEW C-C  
ROTATED 90° C.W.



SECTION D-D  
(SEE NOTE 7 AND 9)



NOTES:

1. DELETED
2. FILLER R00 OPTIONAL ON ALL FIELD WELDS UNLESS OTHERWISE SPECIFIED.
3. POSITION & WELD ADJUSTING SCREWS AT INSTALLATION, SUCH THAT WEDGE SEATS WITHIN RANGE SPECIFIED IN SECT D-D.
4. FOR BEAM BOLT DETAIL SEE PBAPS DRAWING PB SDOC G-080-VC-269, SHEET 1.
5. FOR RESTRAINER BRACKET ADJUSTING SET SCREW CONFIGURATION SEE PBAPS DRAWING PB SDOC G-080-VC-273, SHEET 1.
6. FOR JET PUMP SLIP-JOINT CLAMP CONFIGURATION SEE PBAPS DRAWING PB SDOC G-080-VC-323.
7. AN IMPROVED MAIN WEDGE DESIGN MAY BE UTILIZED FOR SOME JET PUMPS.
8. ECR 06-00213 HAS BEEN APPROVED FOR PBAPS UNITS 2 & 3, WHICH ALLOWS RESTORATION OF THE RESTRAINER BRACKET SURFACE CONTACTING THE MAIN WEDGE, IF WORN AND THE WEDGE IS REPLACED.
9. ECR 06-00212 HAS BEEN APPROVED FOR PBAPS UNITS 2 & 3, WHICH ALLOWS STAKING OF THE ADJUSTING SCREWS.

PEACH BOTTOM ATOMIC POWER STATION UNITS 2 AND 3 UPDATED FINAL SAFETY ANALYSIS
JET PUMP
FIGURE 3.3.5

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**FIGURE 3.3.6**  
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# LOCATION OF PRESSURE DIFFERENTIALS

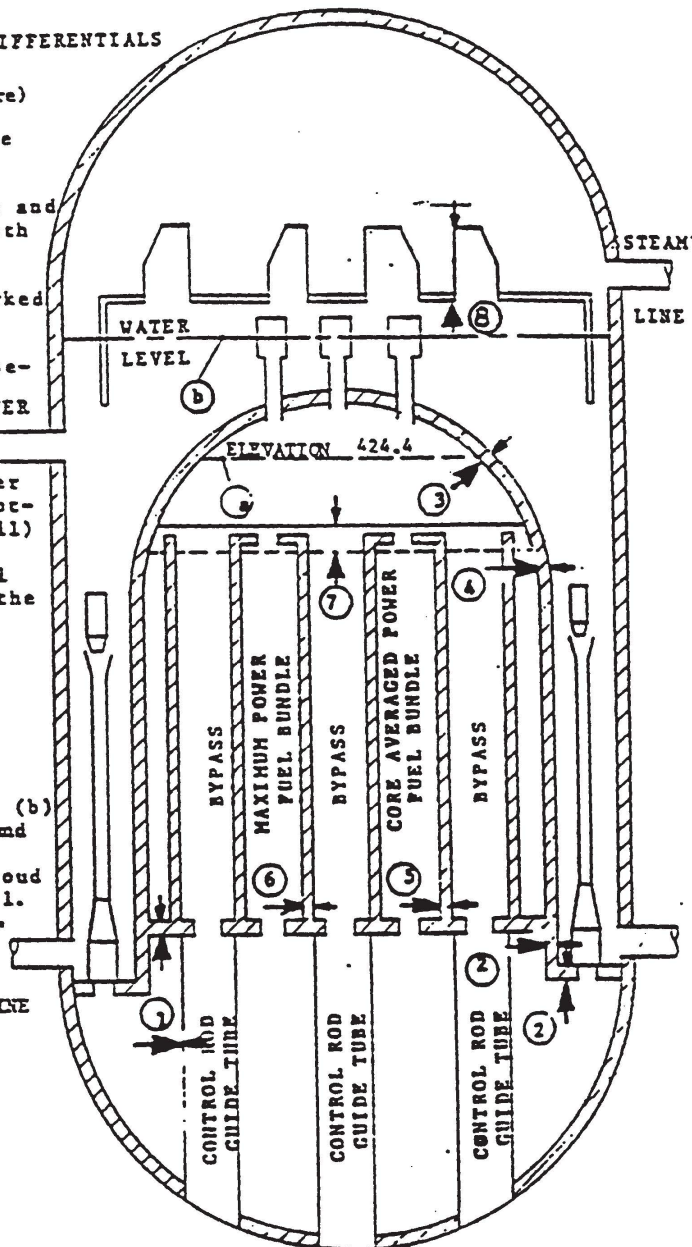
(Large arrowhead is on the side of the higher pressure)

1. Core Plate and Guide Tubes
2. Shroud Support Ring and Lower Shroud (beneath the core plate)
3. Shroud Head (at marked elevation)
4. Upper Shroud (just below the top guide)
5. Core Averaged Power Fuel Bundle (at bottom of channel wall)
6. Maximum Power Fuel Bundle (only for the Normal and Upset Conditions)
7. Top Guide
8. Steam Dryers.

9. From points (a) to (b) the Irreversible\* and Elevation Pressure Drops from the Shroud Head to Water Level.

Total Shroud Head  $\Delta P$  =  
Sum of Irreversible  
+ Elevation

RECIRCULATION LINE



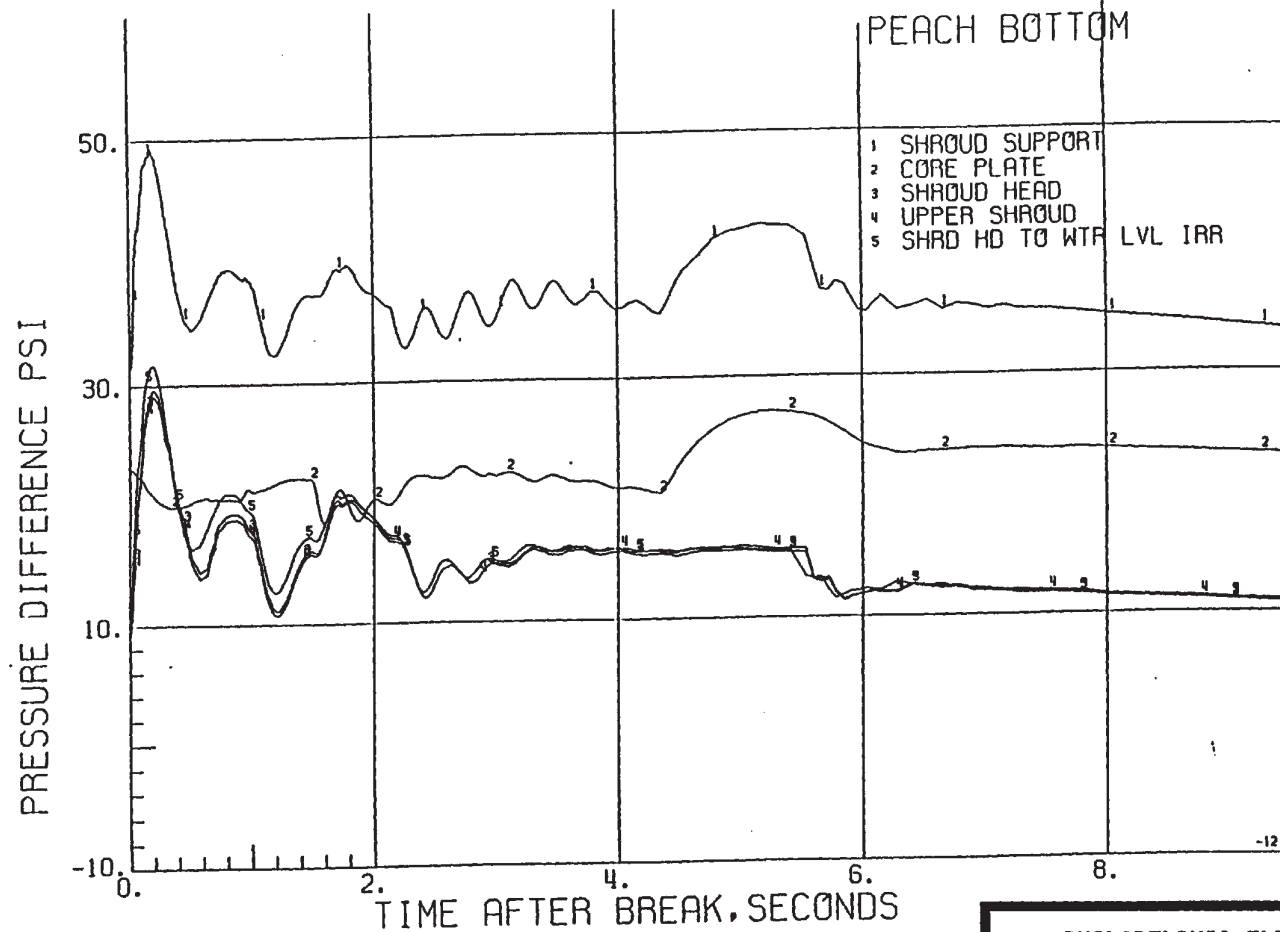
\* Flow term

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LOCATION OF TABULATED  
PRESSURE DIFFERENTIALS

FIGURE 3.3.7

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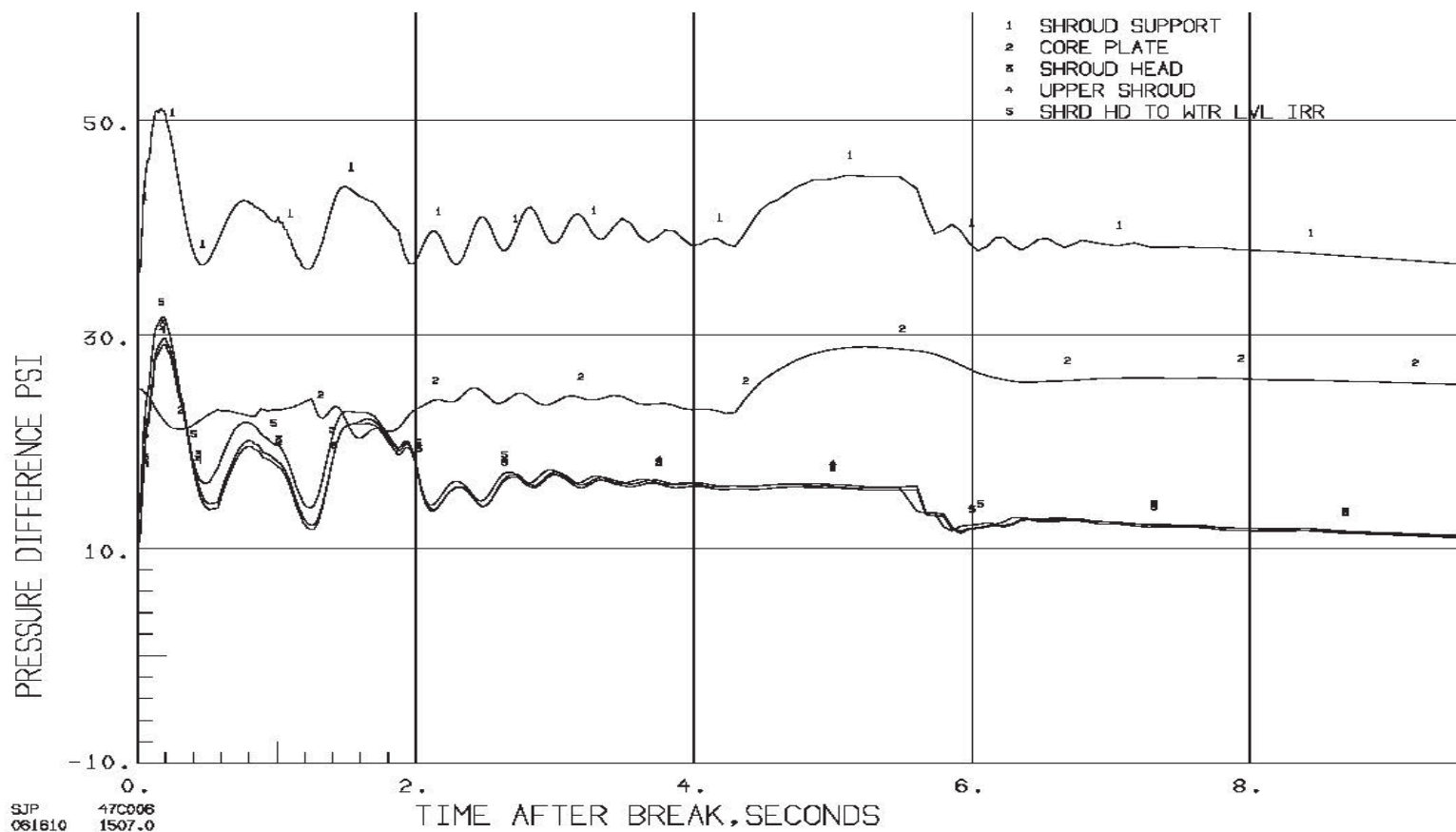
POWER = 4030 Mw  
FLOW = 110% RATED COREFLOW

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TRANSIENT PRESSURE DIFFERENTIALS  
FOLLOWING A STEAM LINE BREAK

FIGURE 3.3.8

REV. 26 04/17



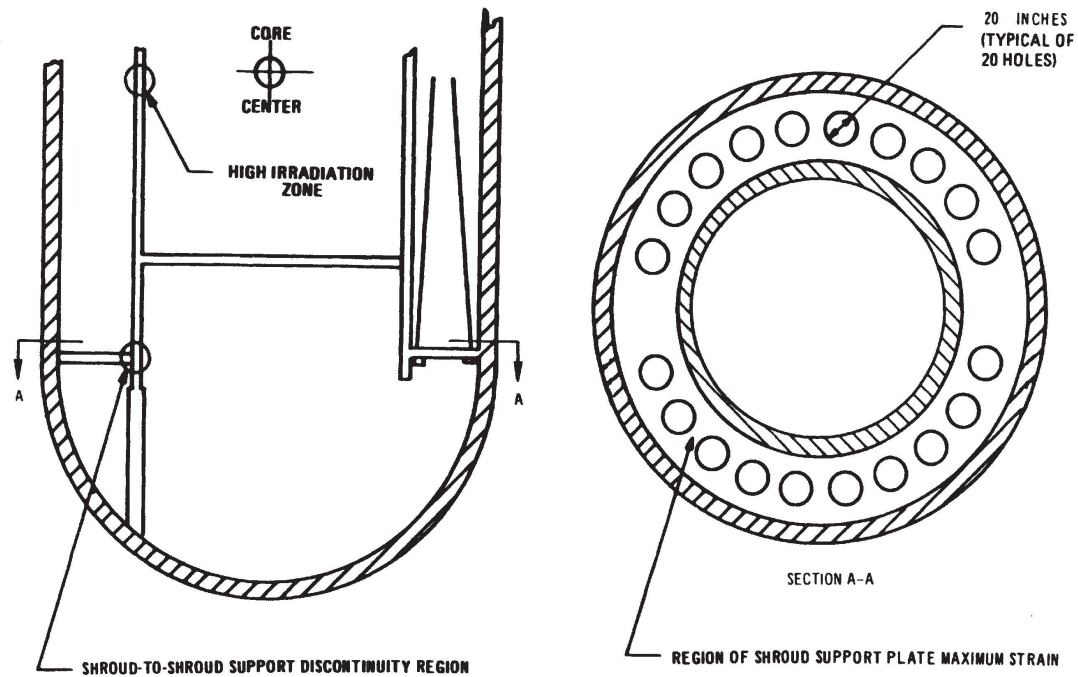
POWER = 4030 MWt  
FLOW = 110% RATED COREFLOW

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UNIT 2  
TRANSIENT PRESSURE DIFFERENTIALS  
FOLLOWING A STEAM LINE BREAK

FIGURE 3.3.8A

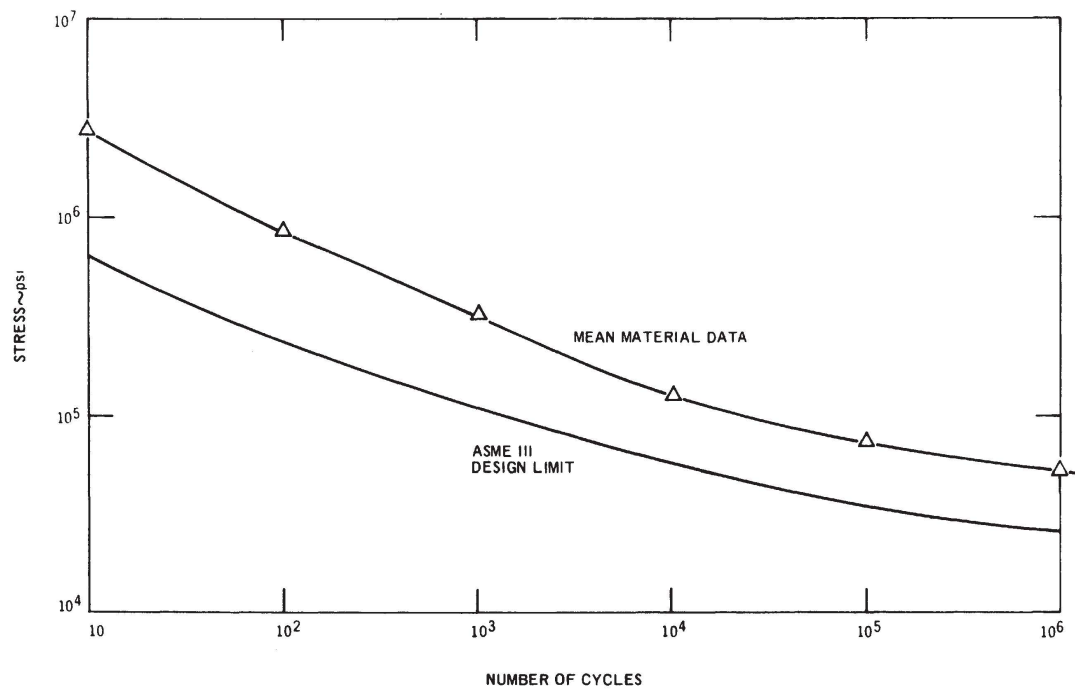
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THERMAL SHOCK TRANSIENT  
ANALYSIS ZONES

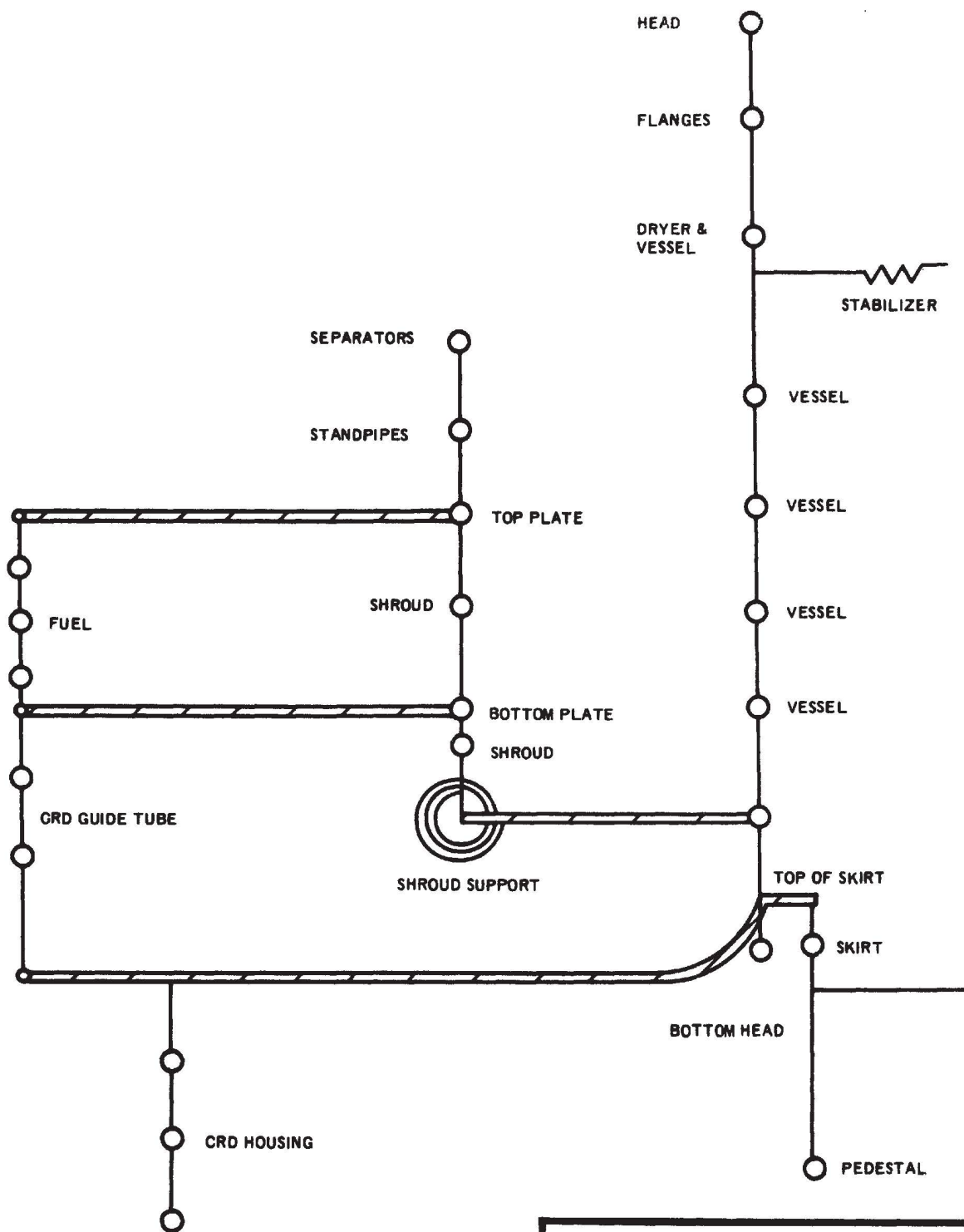
FIGURE 3.3.9



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MATERIALS BEHAVIOR GRAPH — CYCLES  
VERSUS STRESS FOR STAINLESS STEEL

FIGURE 3.3.10

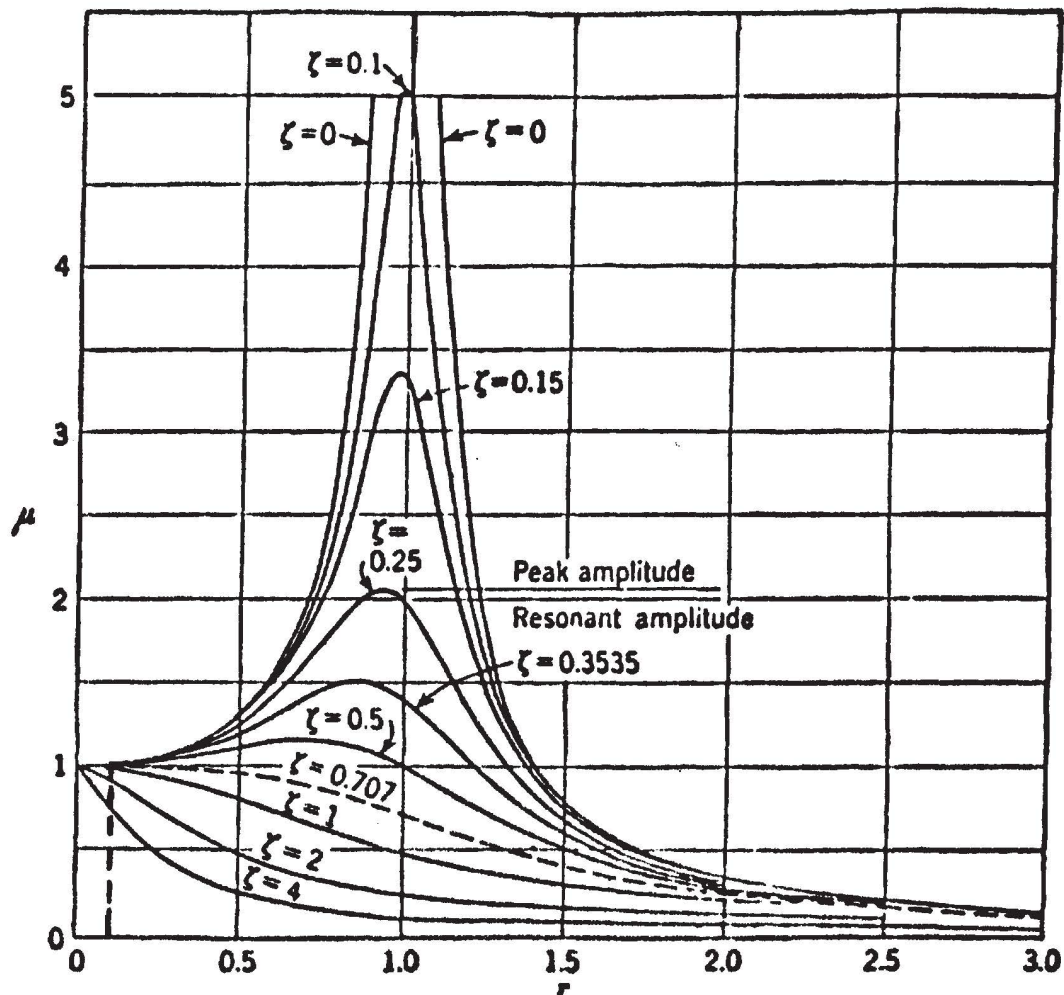


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**ANALYTICAL MODEL OF THE REACTOR  
VESSEL INTERNALS**

**FIGURE 3.3.11**





The amplification factor  $\mu$  as a function of the frequency ratio  $r$  for various amounts of viscous damping.

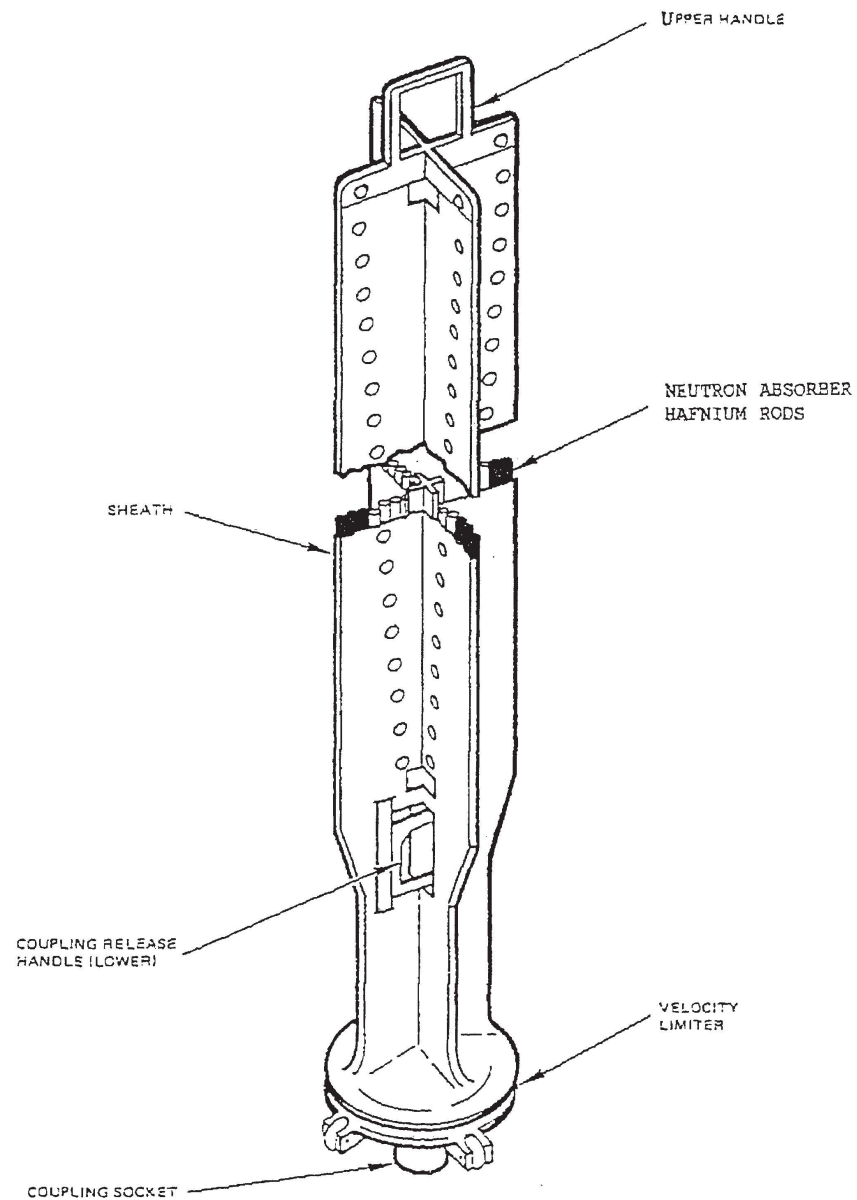
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$\mu(\tau)$  FOR VARIOUS AMOUNTS  
OF VISCOUS DAMPING

FIGURE 3.3.12

Figure 3.4.1

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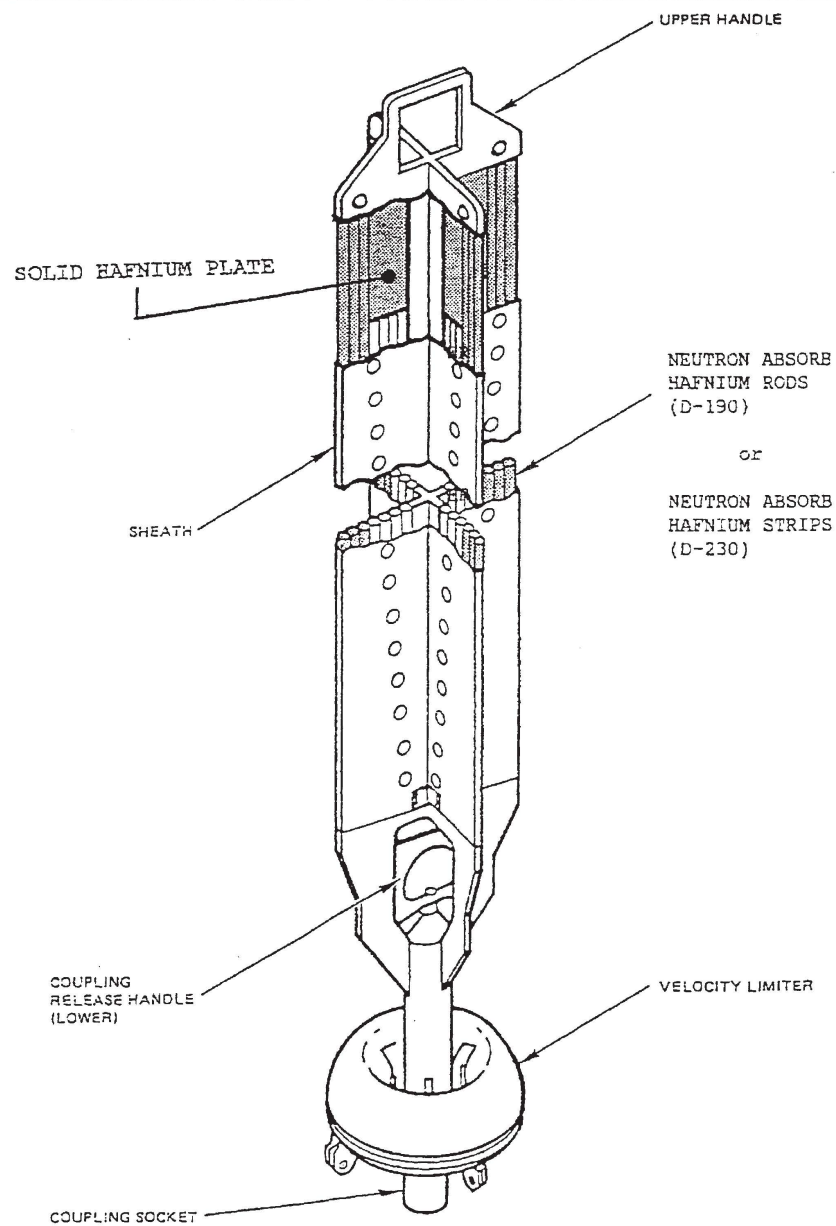


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CONTROL ROD - ISOMETRIC  
DURALIFE 160

FIGURE 3.4.1A

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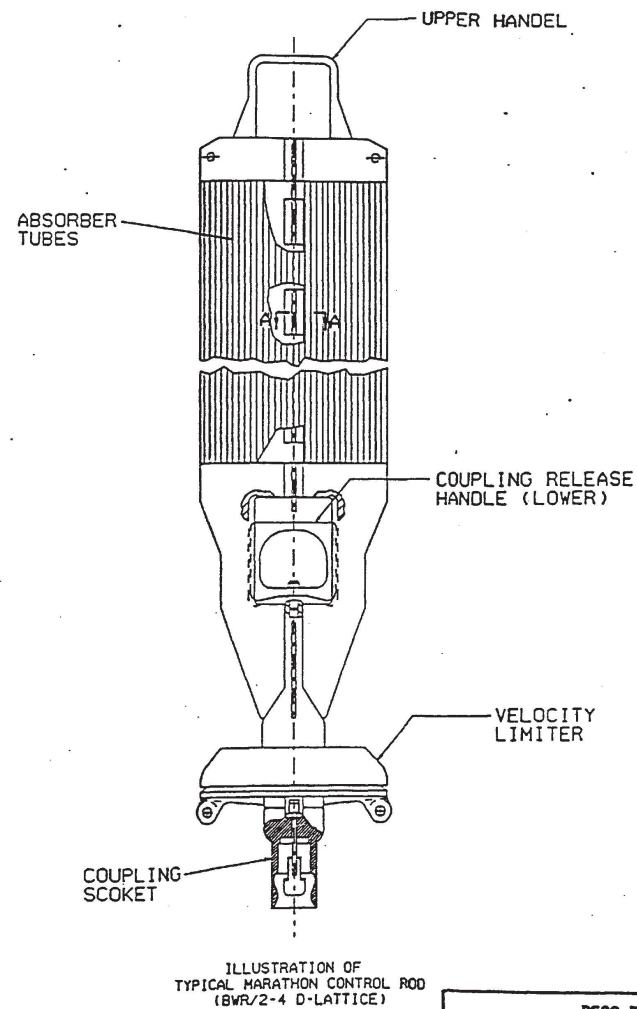
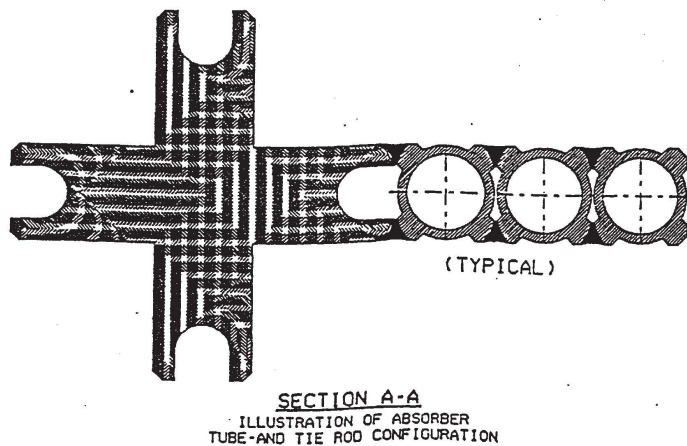
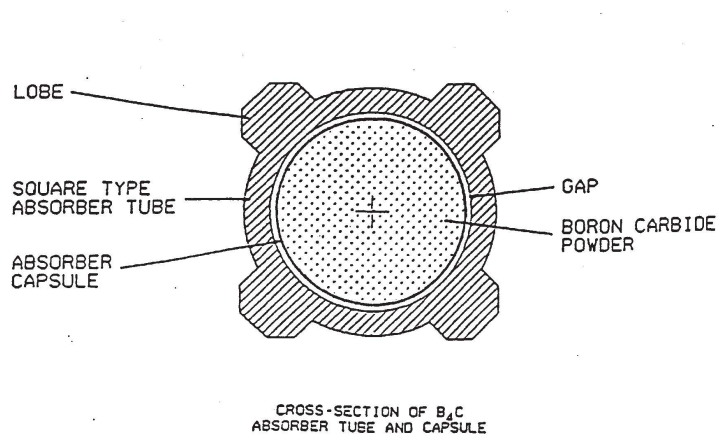


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CONTROL ROD - ISOMETRIC  
DURALIFE 190, 230

FIGURE 3.4.1B

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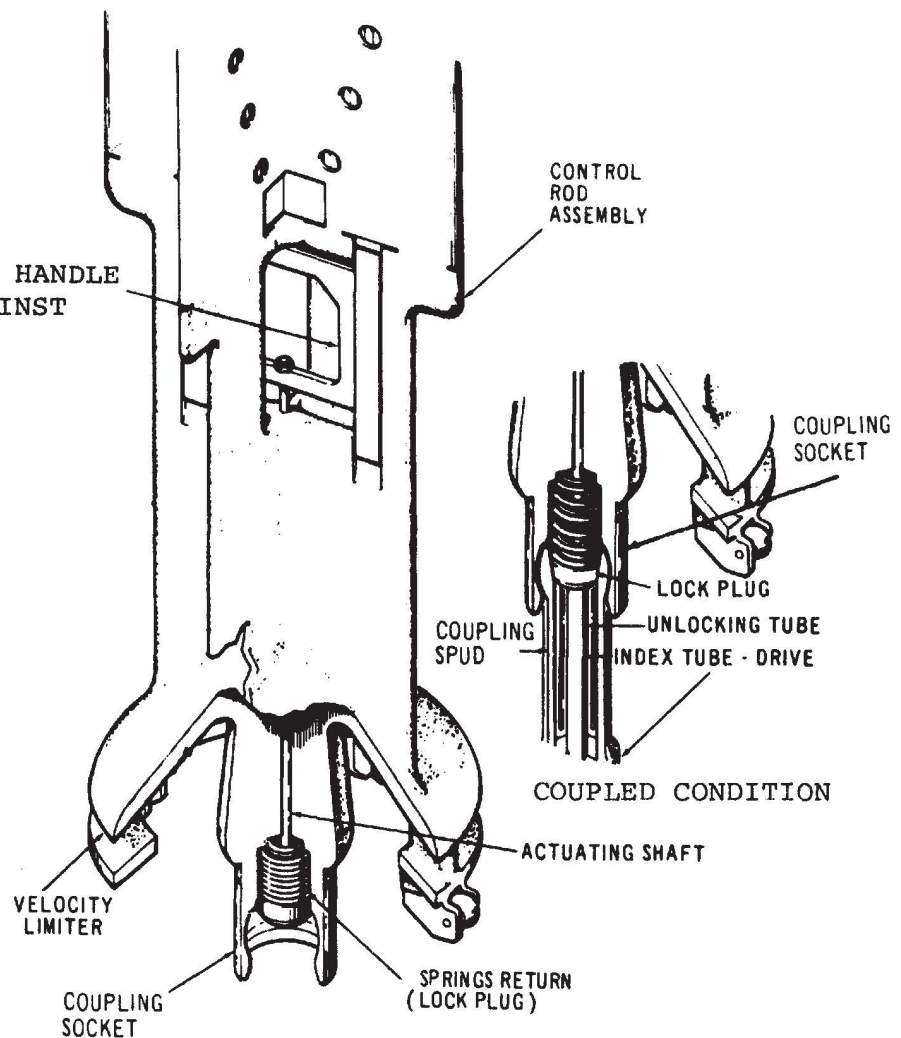
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CONTROL ROD  
MARATHON

FIGURE 3.4.1C

REV. 14 05/97

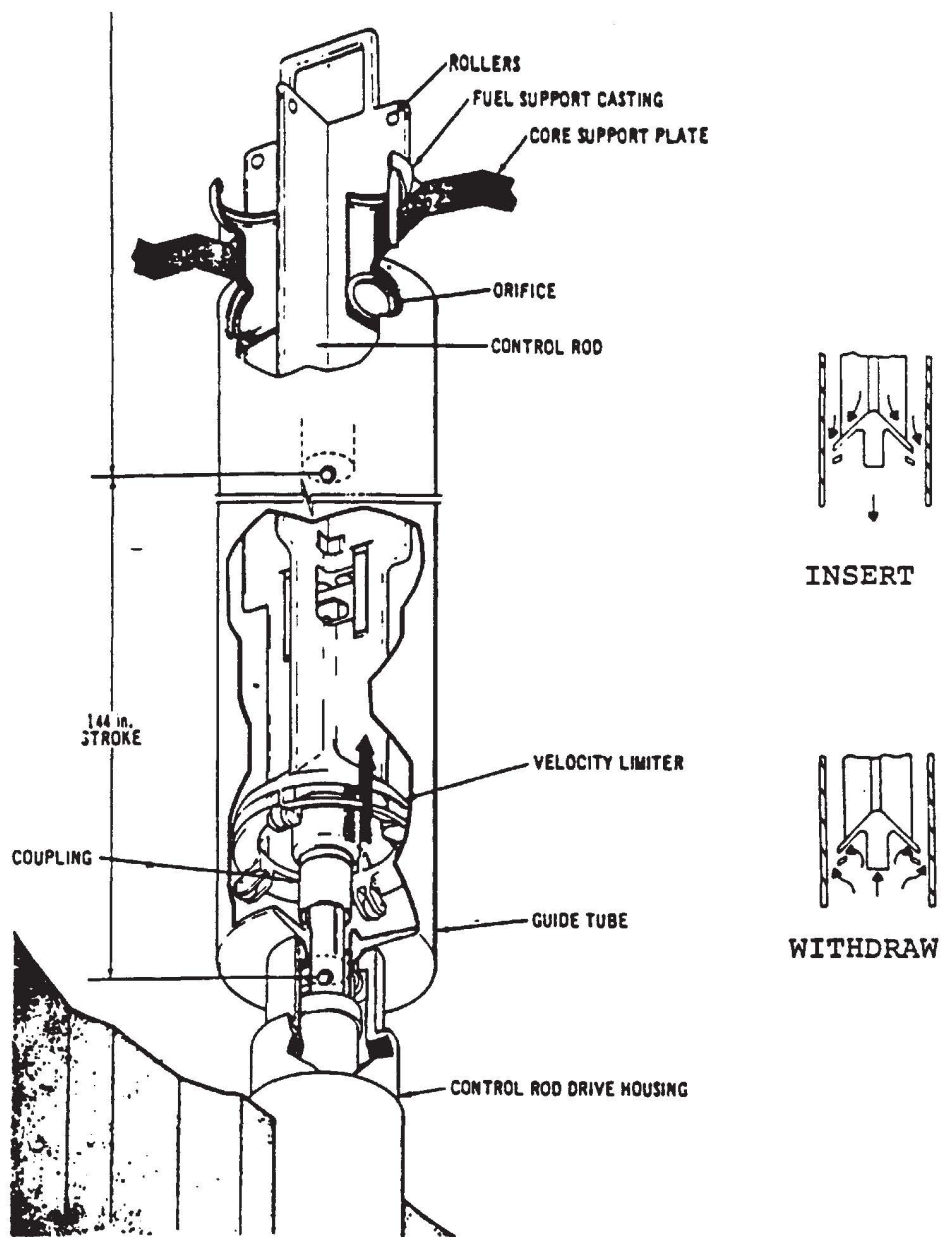
COUPLING RELEASE HANDLE  
SHOWN RAISED AGAINST  
SPRING FORCE



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**CONTROL ROD TO CONTROL  
DRIVE COUPLING — ISOMETRIC**

**FIGURE 3.4.2**



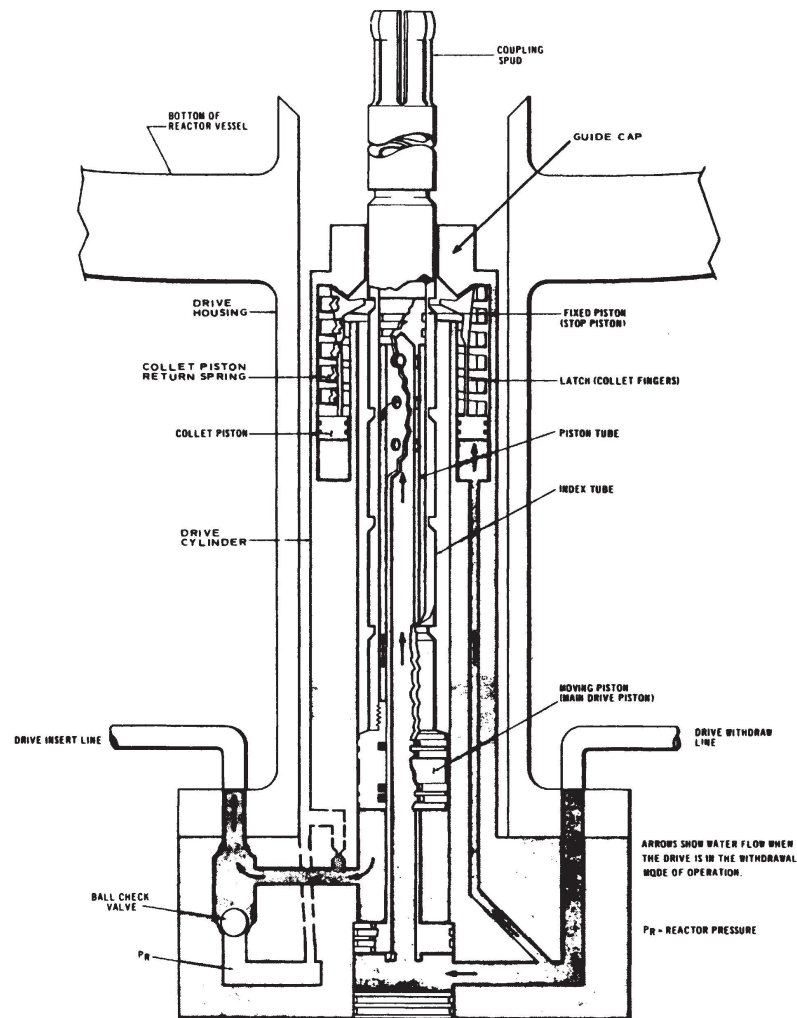
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**CONTROL ROD VELOCITY LIMITER —  
ISOMETRIC**

**FIGURE 3.4.3**

**REV. 14 05/97**



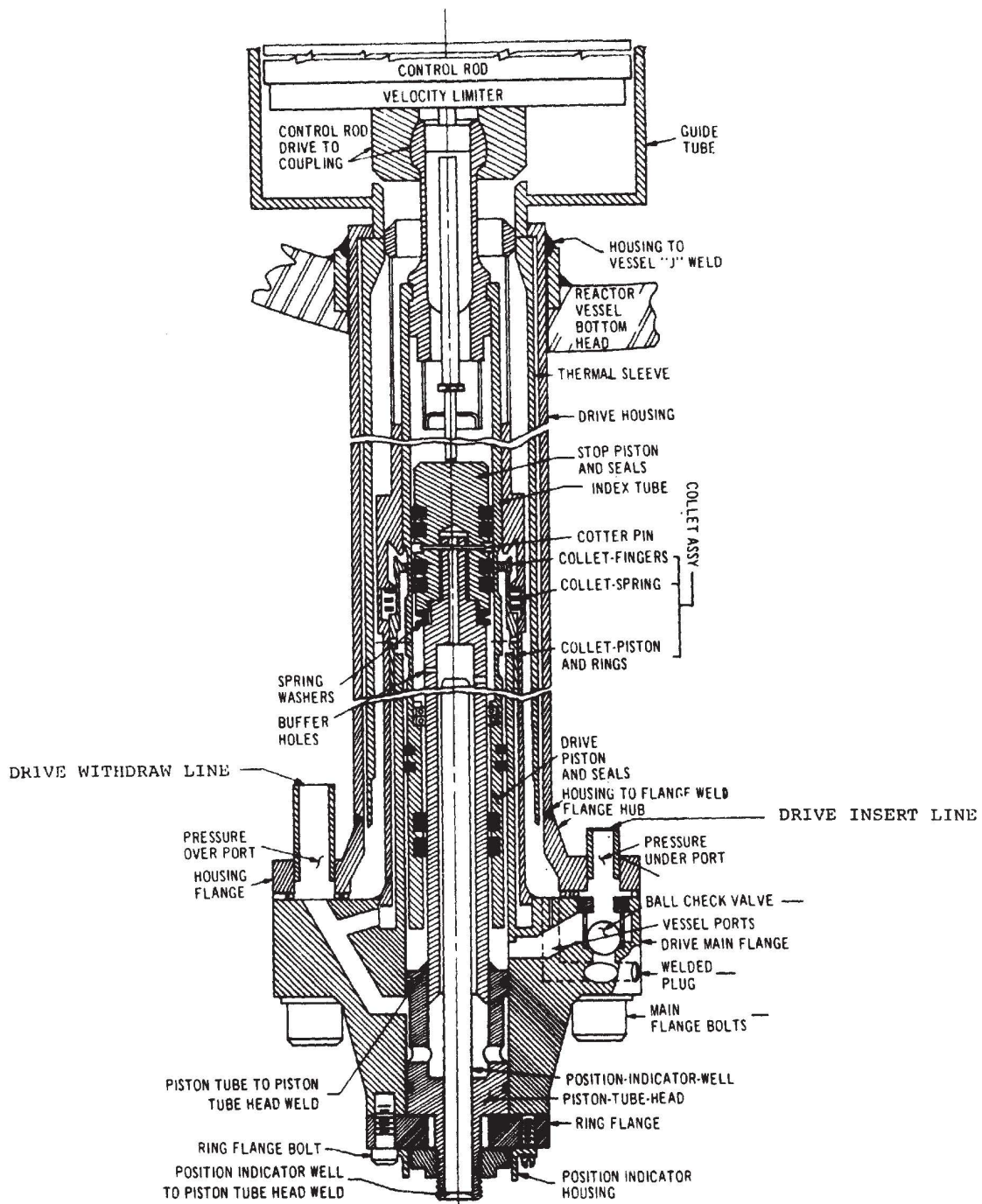


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CONTROL ROD DRIVE. SIMPLIFIED  
COMPONENT ILLUSTRATION

FIGURE 3.4.4

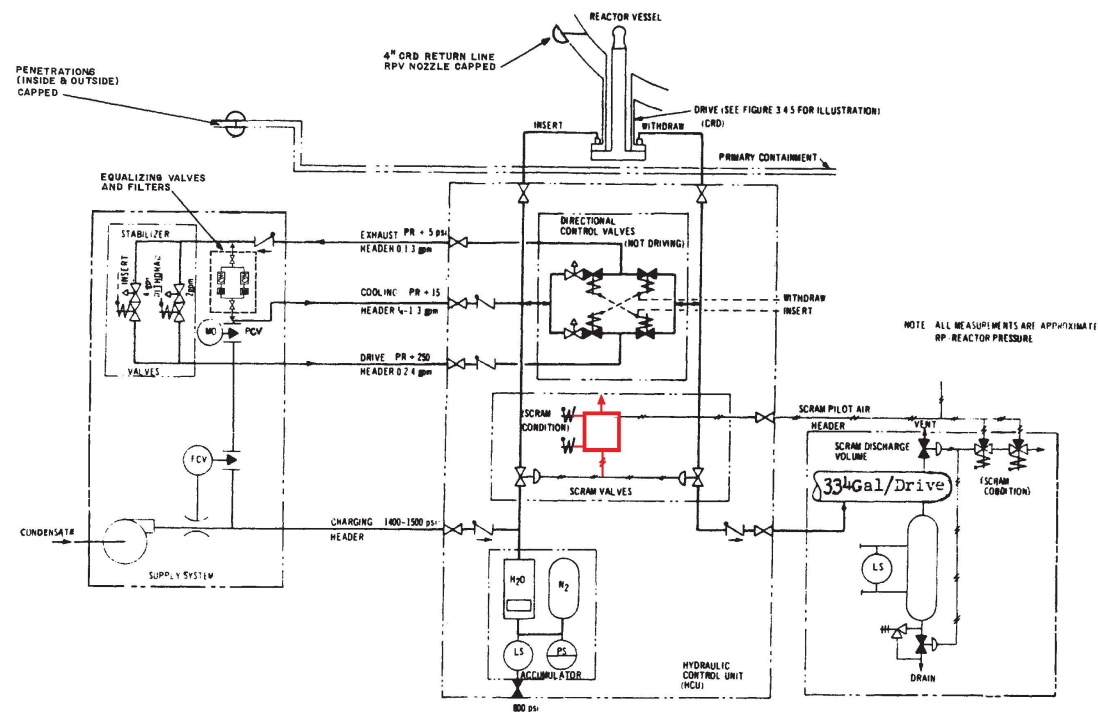




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**CONTROL ROD DRIVE, SCHEMATIC  
DIAGRAM**

**FIGURE 3.4.5**



PEACH BOTTOM ATOMIC POWER STATION  
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CONTROL ROD DRIVE  
HYDRAULIC CONTROL SYSTEM  
SIMPLIFIED COMPONENT ILLUSTRATION  
UNITS 2 AND 3

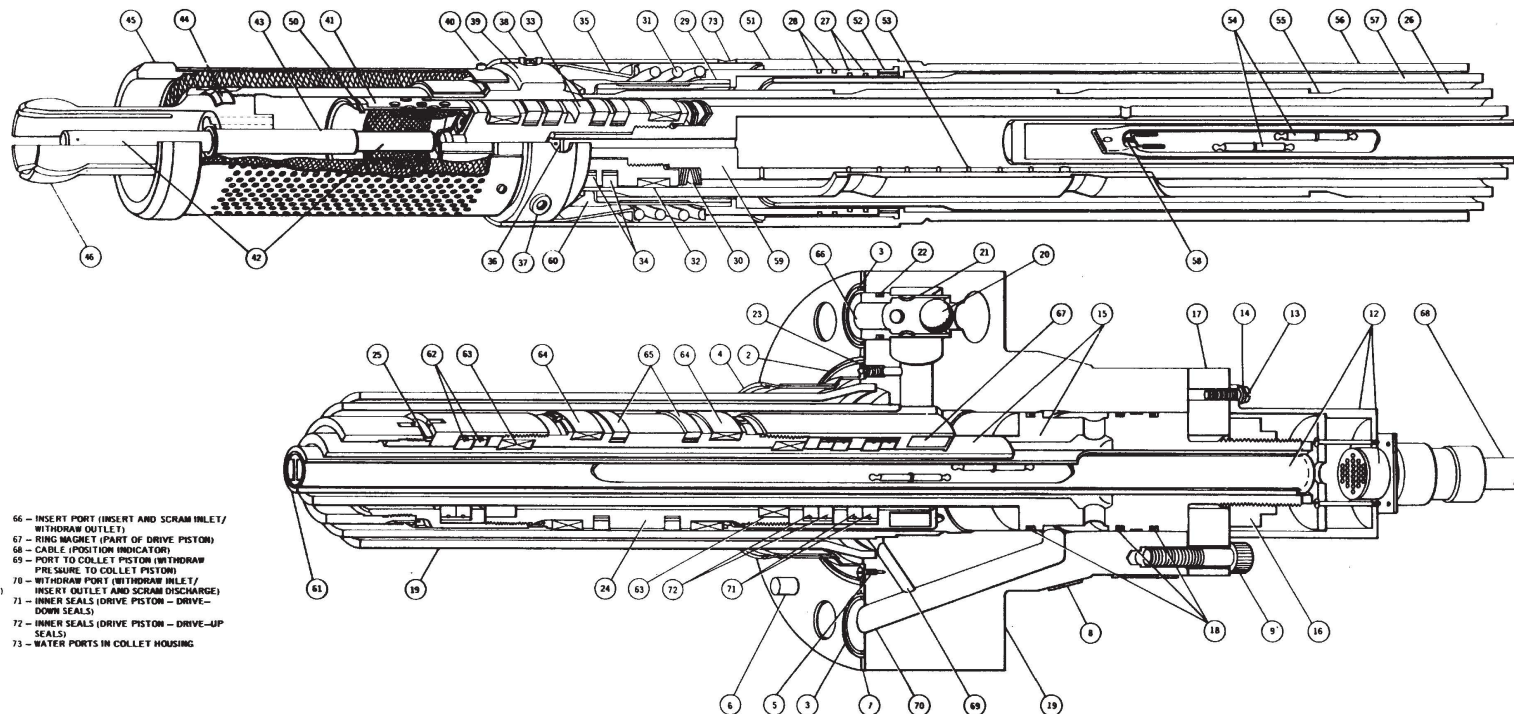
FIGURE 3.4.6

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Figure 3.4.7 thru 3.4.8

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- 2 - O-RING (ROD FLANGE FACE)
- 3 - O-RING (INSERT AND WITHDRAW PORTS)
- 4 - STRAINER
- 5 - FLAT HEAD SCREW (STRAINER-MOUNTING)
- 6 - DOWEL ALIGNMENT PIN
- 7 - O-RING SPACER
- 8 - NAME PLATE
- 9 - SOCKET-HEAD CAP SCREW (RING FLANGE MOUNTING)
- 12 - POSITION INDICATOR PROBE
- 13 - FILLISTER-HEAD SCREW (POSITION INDICATOR PROBE MOUNTING)
- 14 - LOCKWASHER (FOR PART 13)
- 15 - PISTON TUBE
- 16 - NUT (PISTON TUBE)
- 17 - RING FLANGE
- 18 - O-RING (PISTON TUBE)
- 19 - CYLINDER TUBE AND FLANGE
- 20 - BALL (CHECK VALVE)
- 21 - BALL RETAINER
- 22 - O-RING (BALL RETAINER)
- 23 - SET SCREW PLUG (COOLING WATER ORIFICE)
- 24 - DRIVE PISTON
- 25 - BAND
- 26 - INDEX TUBE
- 27 - SEAL RING (COLLET PISTON - INTERNAL)
- 28 - SEAL RING (COLLET PISTON - EXTERNAL)
- 29 - COLLET AND PISTON
- 30 - SPRING WASHERS
- 31 - COLLET SPRING
- 32 - SPLIT BUSHING (STOP PISTON)
- 33 - STOP PISTON
- 34 - SEAL RING (STOP PISTON)
- 35 - BARREL
- 36 - COTTER PIN (STOP PISTON)
- 37 - PLUG (GUIDE CAP)
- 38 - FILLISTER-HEAD SCREW (GUIDE CAP PLUG MOUNTING)
- 39 - GUIDE CAP
- 40 - DRILLED FILLISTER-HEAD SCREW (OUTER FILTER MOUNTING)
- 41 - INNER FILTER
- 42 - ROD
- 43 - TUBE
- 44 - BAND
- 45 - FILTER (OUTER)
- 46 - SPUD
- 50 - SEAL RING (INNER FILTER)
- 51 - COLLET HOUSING (PORTION OF OUTER TUBE)
- 52 - SPACER (PART OF CYLINDER, TUBE, AND FLANGE)
- 53 - BUFFER ORIFICES IN PISTON TUBE (TYPICAL)
- 54 - POSITION INDICATOR SWITCHES
- 55 - INDEX TUBE NOTCH
- 56 - OUTER TUBE (PART OF CYLINDER, TUBE, AND FLANGE)
- 57 - INNER CYLINDER (PART OF CYLINDER, TUBE, AND FLANGE)
- 58 - THERMOCOUPLE (PART OF POSITION INDICATOR PROBE)
- 59 - STUD (PORTION OF PISTON TUBE)
- 60 - COLLET FINGER (PART OF COLLET AND PISTON)
- 61 - INDICATOR TUBE (PART OF PISTON TUBE)
- 62 - INNER SEALS (DRIVE PISTON-BUFFER SEALS)
- 63 - INTERNAL BUSHING (DRIVE PISTON)
- 64 - EXTERNAL BUSHING (DRIVE PISTON)
- 65 - OUTER SEALS (DRIVE PISTON)
- 66 - INSERT PORT (INSERT AND SCRAM INLET/ WITHDRAW OUTLET)
- 67 - RING MAGNET (PART OF DRIVE PISTON)
- 68 - CABLE (POSITION INDICATOR)
- 69 - PORT TO COLLET PISTON (WITHDRAW PRESSURE TO COLLET PISTON)
- 70 - WITHDRAW PORT (WITHDRAW INLET/ INSERT OUTLET AND SCRAM DISCHARGE)
- 71 - INNER SEALS (DRIVE PISTON - DRIVE-DOWN SEALS)
- 72 - INNER SEALS (DRIVE PISTON - DRIVE-UP SEALS)
- 73 - WATER PORTS IN COLLET HOUSING



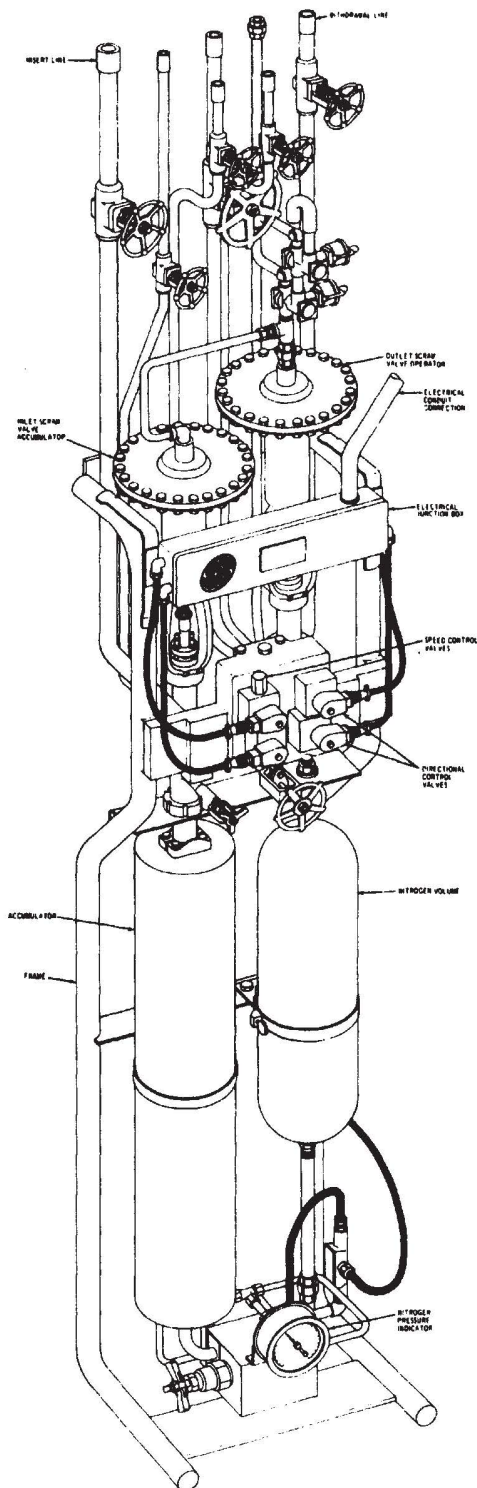
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CONTROL ROD DRIVE CUTAWAY  
ILLUSTRATION

FIGURE 3.4.9



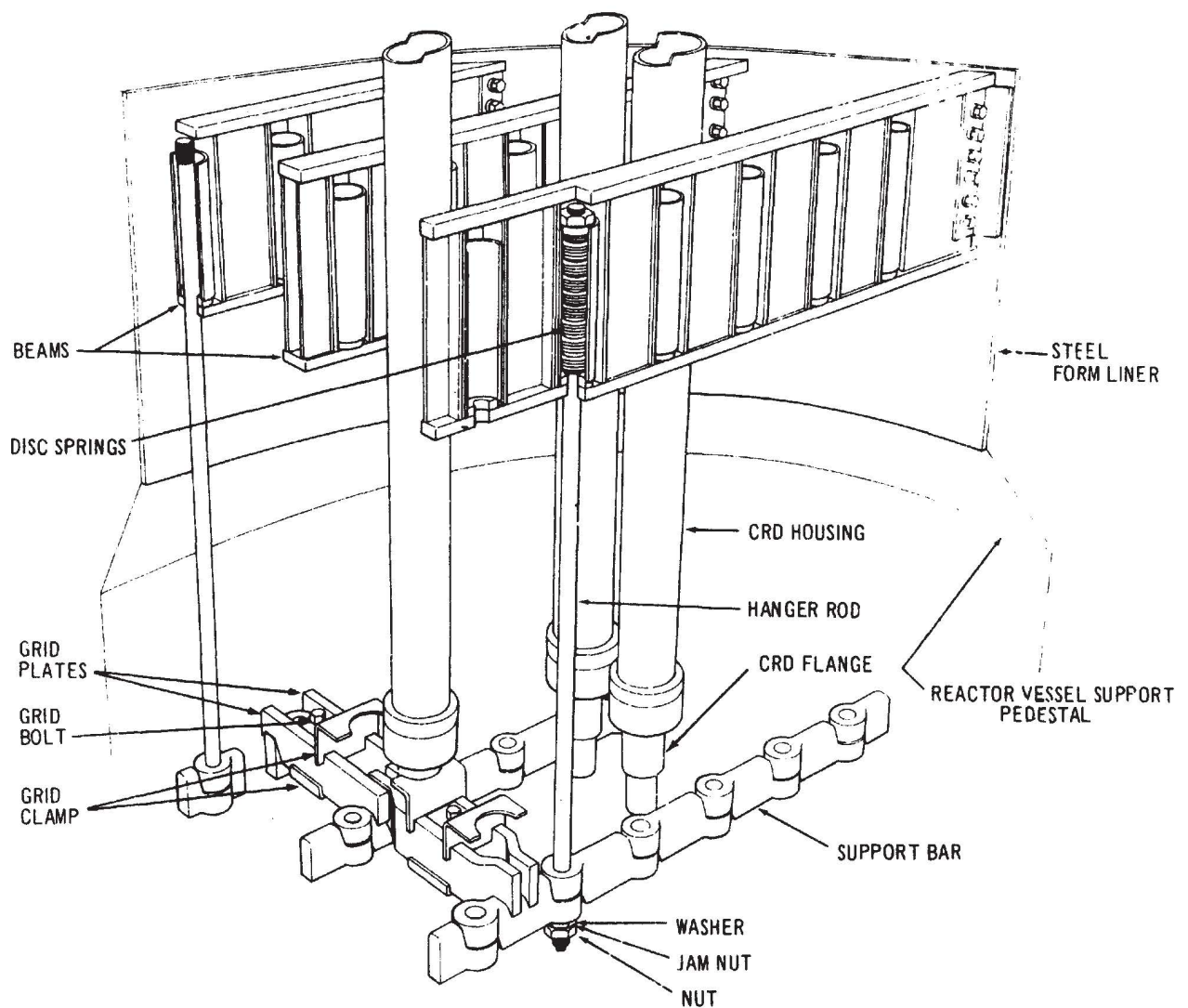




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**CONTROL ROD HYDRAULIC CONTROL  
UNIT — ISOMETRIC**

**FIGURE 3.4.11**



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UNITS 2 AND 3  
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**CONTROL ROD HOUSING SUPPORT —  
ISOMETRIC**

**FIGURE 3.5.1**

Figure 3.6.1

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The figures listed below are contained in the referenced documents and are not reproduced here.

<u>FIGURE NO.</u>	<u>TITLE</u>	<u>REFERENCE/ FIGURE</u>
3.6.2	Scram Reactivity and CRD Specifications, BOC5 to EOC5-1,000 MWd/t	11/2a
3.6.3	Scram Reactivity and CRD Specifications, EOC5-1,000 MWd/t to EOC5 Unit 2	11/2b
3.6.4	Scram Reactivity and CRD Specifications unit 3	19/2

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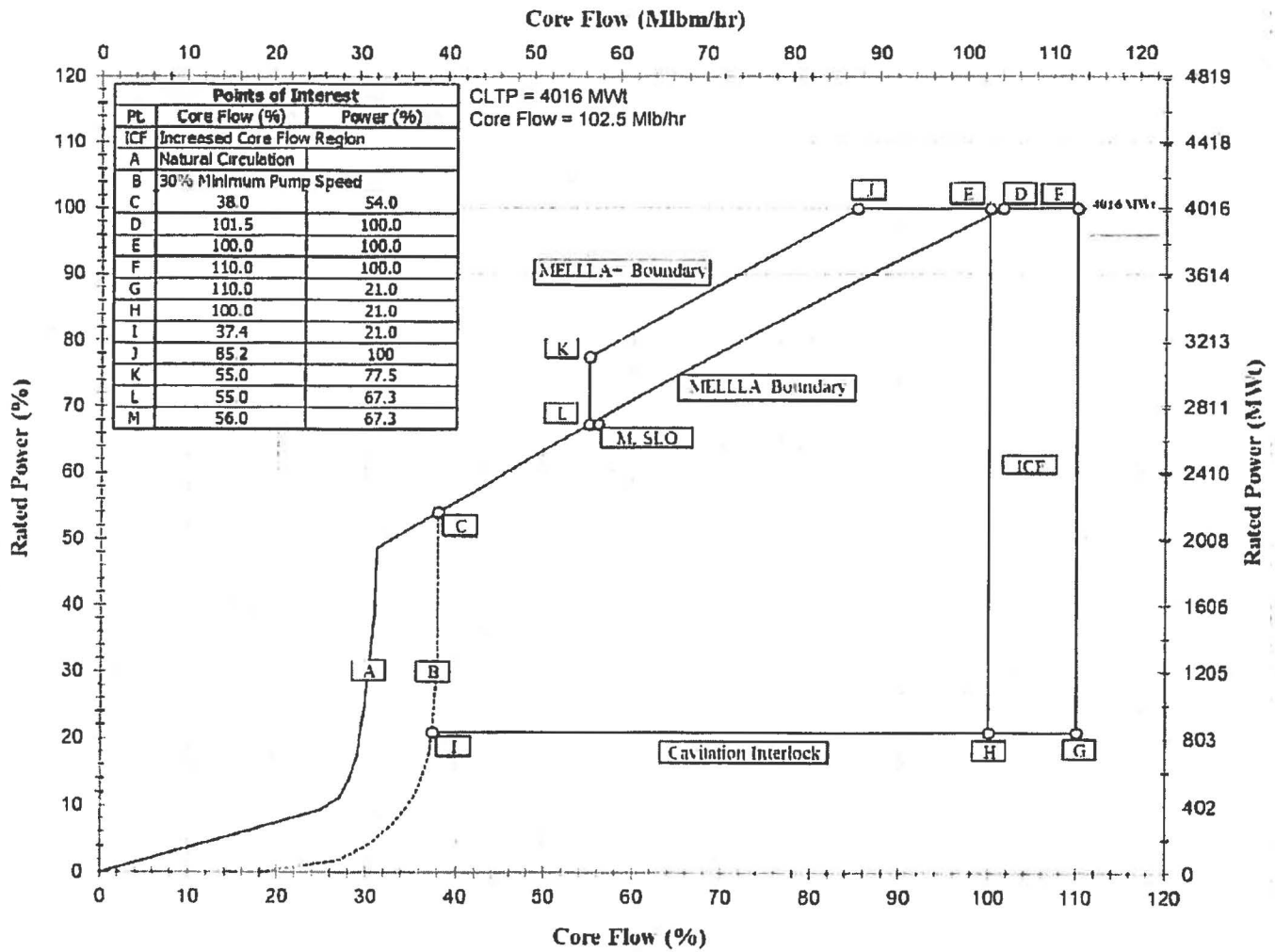
SUBSECTION 3.6  
FIGURES

FIGURES 3.6.2 THROUGH 3.6.4 REV. 12 01/94

Figure 3.6.5 thru 3.6.35

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OPERATING POWER FLOW MAP

FIGURE 3.7.1

REV. 27 04/19

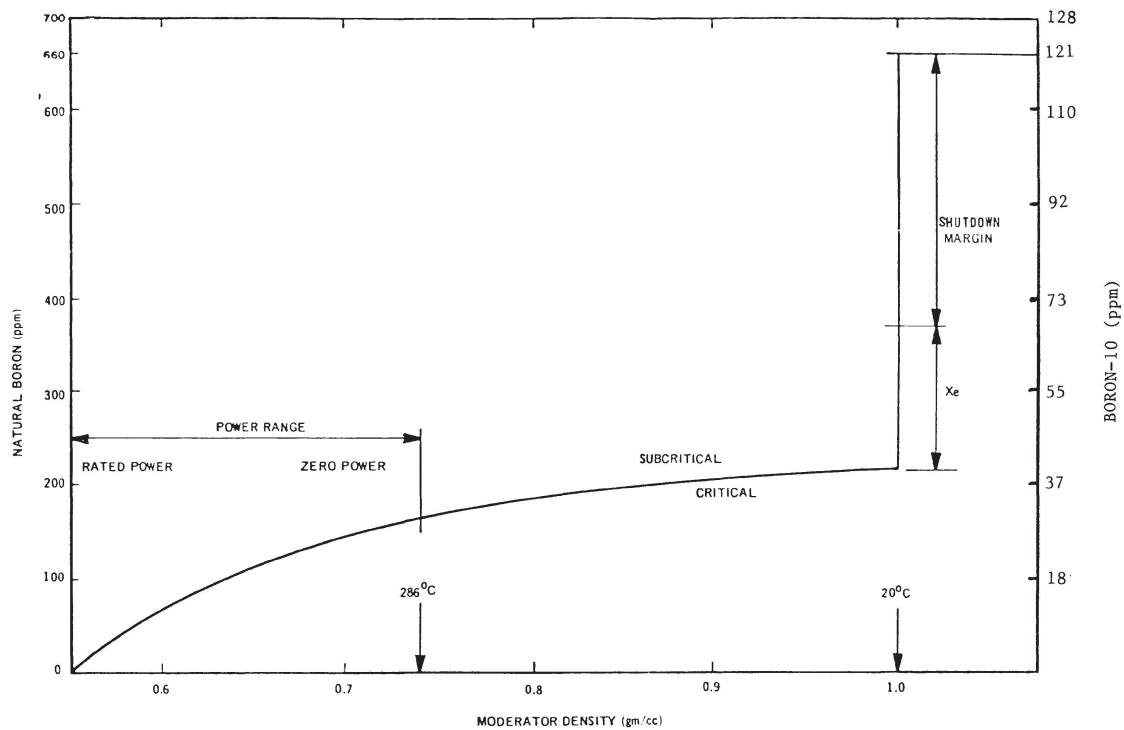
Per MELLLA+

Figure 3.7.1A

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Figure 3.8.1 thru 3.8.3

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BORON REQUIREMENTS  
OF THE STANDBY  
LIQUID CONTROL SYSTEM

FIGURE 3.8.4

REV. 6 01/88

Figure 3.8.5

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