

MEMO  
E.M. 5351

WESTINGHOUSE ELECTRIC CORPORATION  
ELECTRO-MECHANICAL DIVISION  
CHESWICK, PENNSYLVANIA

50-448

SOUTH TEXAS PROJECT UNIT NO. 1  
MODEL 100 REACTOR COOLANT PUMP  
PRESSURE BOUNDARY SUMMARY REPORT

TGX - S.O. U395

February 25, 1981

ENGINEERING MEMORANDUM 5351

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This document complies  
with the provisions  
of the ASME Boiler  
and Pressure Vessel  
Code Section III  
through 573 Addenda  
and Equipment  
Specifications  
952721, Rev. 4  
and G-952342,  
Rev. 2 including  
Interim Revs. 1  
and 2 to Rev. 2.

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RECORD OF REVISIONS

Revision Number	Date	Revision	Revised by:	Checked by:
0	2/25/81	Original Issue	J. D. Price	L. E. Parsons

## TABLE OF CONTENTS

	<u>Page</u>
RECORD OF REVISIONS . . . . .	i
ABSTRACT . . . . .	11
LIST OF FIGURES . . . . .	v
LIST OF TABLES . . . . .	vi
1.0 INTRODUCTION . . . . .	1-1
2.0 SUMMARY AND CONCLUSIONS . . . . .	2-1
3.0 COMPONENT DESCRIPTION . . . . .	3-1
3.1 Pressure Boundary . . . . .	3-3
4.0 CODE CRITERIA - CODE ITEMS . . . . .	4-1
4.1 Introduction . . . . .	4-1
4.2 Stress Limits (NB-3200) . . . . .	4-3
4.2.1 Stress Limits for Other than Bolts (NB-3220) . . . .	4-3
4.2.2 Stress Limits for Bolts (NB-3230) . . . . .	4-3
4.3 Fatigue . . . . .	4-5
4.4 Tube Collapse . . . . .	4-6
5.0 ANALYTICAL TECHNIQUES . . . . .	5-1
6.0 DESIGN REQUIREMENTS . . . . .	6-1
6.1 Generic Basis . . . . .	6-1
6.2 TGX Requirements . . . . .	6-1
6.2.1 Drawings . . . . .	6-1
6.2.2 Specification . . . . .	6-7
6.2.3 ASME Code Requirements . . . . .	6-9
7.0 SUMMARY OF STRESS RESULTS . . . . .	7-1

TABLE OF CONTENTS (Continued)

	<u>Page</u>
8.0 SITE RELATED ANALYSES . . . . .	8-1
8.1 Component Fabrication Variation Documents . . . . .	8-1
8.2 Seismic Analysis . . . . .	8-146
8.2.1 Seal Housing . . . . .	8-146
8.2.2 Main Closure . . . . .	8-149
8.3 Casing Suction and Discharge Nozzle Analysis . . . . .	8-155
8.4 Thermal Analysis Discussion . . . . .	8-164
8.4.1 Fatigue Waiver Evaluation . . . . .	8-165
8.4.2 Casing Stress Range . . . . .	8-166
9.0 ACKNOWLEDGEMENTS . . . . .	9-1
10.0 REFERENCES . . . . .	10-1
11.0 DISTRIBUTION LIST . . . . .	11-1
12.0 TGX DRAWINGS . . . . .	12-1
13.0 MICROFICHE . . . . .	13-1

# LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
3-1	Model 100 Pump/Motor Assembly . . . . .	3-2
3-2	Pressure Boundary Components . . . . .	3-4
3-3	Seal Housing Area . . . . .	3-7
8-1	Excessive Feedwater Flow Transient as Compared to WEMD Combined Transient Group 3 . . . . .	8-173
8-2	Excessive Feedwater Flow Transient Used in Discharge Nozzle WECAN Run . . . . .	8-175

# LIST OF TABLES

<u>Table</u>		<u>Page</u>
4-1	Stress Limits for Other Than Bolts . . . . .	4-4
6-1	General Requirements . . . . .	6-2
6-2	Temperature Requirements . . . . .	6-3
6-3	Pressure Requirements . . . . .	6-4
6-4	Specified Conditions . . . . .	6-5
6-5	Drawing List . . . . .	6-8
7-1	Calculated versus Allowable Stresses . . . . .	7-2
7-2	Stress References . . . . .	7-3
7-3	Nozzle and Support Feet Stresses . . . . .	7-4
7-4	Casing Stresses Due to Nozzle and Foot Loads . . . . .	7-5
8-1	Reactor Coolant Pump Nozzle Loads for TGX . . . . .	8-177
8-2	Stress Intensity Range vs. $3S_m$ Limit in TGX Suction and Discharge Nozzles . . . . .	8-180

## 1.0 INTRODUCTION

The purpose of this report is to verify the structural adequacy of the pressure boundary components of the Model 100 Reactor Coolant Pumps for the South Texas Project Unit No. 1. Verification is essentially based on the analyses presented in the generic stress reports of References 10.4 through 10.10.

The design requirements for the TGX pumps are presented in Section 6.0. Any differences between the design requirements for TGX and those considered in the generic reports are discussed and resolved in this report. Any additional analysis generated by the TGX design requirements is included in Section 8.0.

The stress analysis of the nonpressure boundary components for the TGX pumps is found in Reference 10.13.

## 2.0 SUMMARY AND CONCLUSIONS

Based on a detailed review of all the design and analysis requirements for the TGX reactor coolant pumps, it is concluded that the generic stress reports (References 10.4 through 10.10) are applicable to the TGX analysis. Therefore, based on those generic reports and other analyses included in this report, it is concluded that the pressure boundary components for the TGX reactor coolant pumps satisfy all specific requirements of the E-Specs (References 10.2 and 10.3) and the ASME Code (Reference 10.1).

A complete stress summary for the M100 pressure boundary components for TGX is given in Section 7.0 of this report.



(a,b,c)