

Lehigh University Lehigh Preserve

Fritz Laboratory Reports

Civil and Environmental Engineering

1972

Residual stresses in thick welded plates, project summary report, May 1972

Reidar Bjorhovde

Follow this and additional works at: <http://preserve.lehigh.edu/engr-civil-environmental-fritz-lab-reports>

Recommended Citation

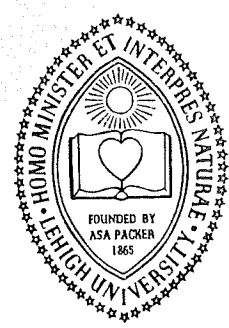
Bjorhovde, Reidar, "Residual stresses in thick welded plates, project summary report, May 1972" (1972). *Fritz Laboratory Reports*. Paper 347.
<http://preserve.lehigh.edu/engr-civil-environmental-fritz-lab-reports/347>

This Technical Report is brought to you for free and open access by the Civil and Environmental Engineering at Lehigh Preserve. It has been accepted for inclusion in Fritz Laboratory Reports by an authorized administrator of Lehigh Preserve. For more information, please contact preserve@lehigh.edu.

337.31

**OFFICE
OF
RESEARCH**

LEHIGH UNIVERSITY



RESIDUAL STRESSES IN THICK WELDED PLATES
Project Summary Report
by
Reidar Bjørhovde
Fritz Engineering Laboratory Report 337.31

FRITZ ENGINEERING
LABORATORY LIBRARY

Project 337

RESIDUAL STRESSES IN THICK WELDED PLATES

Project Summary Report

by

Reidar Bjørhovde

May 1972

Fritz Engineering Laboratory Report No. 337.31

1. INTRODUCTION

Reidar Bjørhovde arrived at Lehigh University in September 1968, and was associated with Project 337, "Residual Stresses in Thick Welded Plates", during his stay at the university. In the period from February 1969 to December 1970 he also served as Secretary of the Column Research Council, whose headquarters are located at Fritz Engineering Laboratory.

Chapter 2 of the report gives a listing of the technical reports and papers that were prepared by Reidar Bjørhovde during his time at the laboratory, and Chapter 3 indicates the location and description of the X-files.

2. TECHNICAL REPORTS AND PAPERS

- F.L. Report No. 337.7 : "Survey of Utilization and Manufacture of Heavy Columns", by R. Bjørhovde and L. Tall
- No. 337.13: "Residual Stresses in Thick Welded Plates", by R. Bjørhovde, J. Brozzetti, G. A. Alpsten, and L. Tall
- No. 337.17: "A Comprehensive Investigation of the Strength of a Heavy Welded Column", by N. Tebedge, R. Bjørhovde, and L. Tall (In preparation)
- No. 337.19: "The Philosophy of Column Design", by R. Bjørhovde
- No. 337.29: "Maximum Column Strength and the Multiple Column Curve Concept", by R. Bjørhovde and L. Tall
- No. 337.29A: "Maximum Column Strength and the Multiple Column Curve Concept", Preliminary Report to Column Research Council Task Group 1, by R. Bjørhovde and L. Tall
- Ph.D. Dissertation: "Deterministic and Probabilistic Approaches to the Strength of Steel Columns", by Reidar Bjørhovde

Other Reports:

"STATPAK--A Computer Program for Statistical Analyses", by R. Bjørhovde (Special Problem Report for Course CE 408, Dr. C. N. Kostem, teacher)

"Column Research Council, Proceedings 1969", Supervised by Dr. L. S. Beedle

"Column Research Council, Proceedings 1970", Supervised by Dr. L. S. Beedle

Papers:

"Modern Methods of Steel Construction in the United States", by R. Bjørhovde; published in BYGG, Journal of the Norwegian Society of Professional Engineers, No. 2, 1971. (In Norwegian.)

"The Largest Testing Machine in the World", by R. Bjørhovde; published in BYGG, Journal of the Norwegian Society of Professional Engineers, No. 2, 1972. (In Norwegian.)

3. DESCRIPTION AND LOCATION
OF FILED MATERIAL

<u>Box No.</u>	<u>Book No.</u>	<u>Description</u>	<u>Location</u>
337 #8	RB-5	Survey on Heavy Columns #1	Rm. 702
337 #8	RB-6	Survey on Heavy Columns #2	Rm. 702
337 #8	RB-7	Survey on Heavy Columns #3	Rm. 702
337 #8	RB-8	Residual Stress Measurements on UM Plates #1	Rm. 702
337 #8	RB-9	Residual Stress Measurements on UM Plates #2	Rm. 702
337 #8	RB-10	Residual Stress Measurements on FC Plates #1	Rm. 702
337 #8	RB-11	Residual Stress Measurements on FC Plates #2	Rm. 702
337 #8	RB-12	Drawings of Plates for Residual Stress Measurements	Rm. 702
337 #8	--	Folder with drawings for all residual stress specimens in proj. 337	Rm. 702
337 #9	--	Computer printouts for statistical analysis of column curves (two binders 11" x 17")	Rm. 702
337 #9	--	Computer printouts for maximum strength of columns (two binders 11" x 17")	Rm. 702
337 #9	--	2 spare copies of F.L. Report No. 337.29A	Rm. 702
337 #10	--	Computer printouts for analysis of maximum column strengths (one binder 11" x 17")	Rm. 702
337 #10	--	Two boxes of computer program source decks (various programs)	Rm. 702
337 #10	--	One box of computer data cards for analysis of maximum column strengths	Rm. 702
337 #11	RB-1	Philosophy of Column Design, Book 1	Rm. 702
337 #11	RB-2	Philosophy of Column Design, Book 2	Rm. 702
337 #11	RB-3	Philosophy of Column Design, Book 3	Rm. 702
337 #11	RB-4	Philosophy of Column Design, Book 4	Rm. 702
337 #11	RB-15	Philosophy of Column Design, Book 5	Rm. 702
337 #11	RB-16	Philosophy of Column Design, Book 6	Rm. 702
337 #11	RB-13	Work Orders issued by R. Bjørhovde	Rm. 702
337 #11	RB-14	F.L. Memoranda for project 337	Rm. 702
337 #11	RB-17	Notices from Lehigh University Computing Center	Rm. 702
337 #11	--	Original (hand-written) manuscript for F.L. Report No. 337.7	Rm. 702

<u>Box No.</u>	<u>Book No.</u>	<u>Description</u>	<u>Location</u>
337 #11	--	Original (hand-written) manuscript of F.L. Report No. 337.13	Rm. 702
337 #11	--	Original (hand-written) manuscript of F.L. Report No. 337.29	Rm. 702
337 #11	--	Original manuscript of F.L. Report No. 337.29A	Rm. 702
337 #12	--	Folders for correspondence related to project 337 (two)	Rm. 702
337 #12	--	Material on Chapter 3 of the CRC Guide (3 folders)	Rm. 702
337 #12	--	Copies of 337 proposals (1 folder)	Rm. 702
337 #12	--	F.L. Library Notices (1 folder)	Rm. 702
337 #12	--	Drawings for F.L. Reports No. 337.13 and 337.29 (4 folders)	Rm. 702
337 #12	--	Xerox-copy of original (hand-written) manuscript of R. Bjørhovde's Ph.D. dissertation	Rm. 702
337 #13	--	Spare copies of F.L. Report No. 337.13	Rm. 702
337 #13	--	Fortran and binary decks for column maximum strength computer program MAXLD2	Rm. 702
--	Slides-337 #1	Slides Nos. 1-200 for proj. 337	N. Tebedge
--	Slides-337 #2	Slides Nos. 201-400 for proj. 337	N. Tebedge
--	Slides-337 #3	Slides Nos. 401-600 for proj. 337	N. Tebedge
--	Slides-337 #4	Slides Nos. 601- for proj. 337	N. Tebedge
--	Slides-321 #1	Slides Nos. 1-200 for proj. 321	N. Tebedge
--	Slides-321 #2	Slides Nos. 201- for proj. 321	N. Tebedge

4. FUTURE ADDRESS

American Institute of Steel Construction
739 Boylston Street, Room 412
Boston, Massachusetts 02116

New address as of 2/74:

*AISC
1221 Avenue of the Americas
New York, NY 10020*