REVIEW OF THE TEXT OF THE AMERICAN STANDARD SPECIFICATIONS FOR STEEL, ADOPTED IN AUGUST, 1901, BY THE AMERICAN SECTION OF THE INTERNATIONAL ASSOCIATION FOR TESTING MATERIALS

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649439416

Review of the Text of the American Standard Specifications for Steel, Adopted in August, 1901, by the American Section of the International Association for Testing Materials by Albert Ladd Colby

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd. Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

ALBERT LADD COLBY

REVIEW OF THE TEXT OF THE AMERICAN STANDARD SPECIFICATIONS FOR STEEL, ADOPTED IN AUGUST, 1901, BY THE AMERICAN SECTION OF THE INTERNATIONAL ASSOCIATION FOR TESTING MATERIALS



REVIEW AND TEXT

OF THE

American Standard Specifications for Steel,

ADOPTED IN AUGUST, 1901, BY THE

AMERICAN SECTION OF THE INTERNATIONAL ASSOCIATION FOR TESTING MATERIALS.

BY

ALBERT LADD COLBY.

Member of Committee No. 1 of American Section of the International Association for Testing Materials.

-ALSO-

Iron and Steel Institute, American Society of Mechanical Engineers, American Institute of Mining Engineers, American Chemical Society, Society of Chemical Industry, American Foundrymen's Association, etc., etc.

Second Edition, Rewritten and Containing the Revised Text of the Standard Specifications.

> RASTON, PA.: THE CHEMICAL PUBLISHING COMPANY. 1902.

Eng 319.02

Engineering Approper

JUN 20 1917 3.4

TR. CORVENORTA SALANA S

1

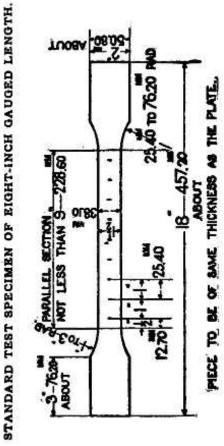
JUN 20 1917 FRANSFERRED TO MANYARE CULERGE LILITARY

ALBERT LADO COLBY.

STANDARD TEST SPECIMEN OF TWO-INCH GAUGED LENGTH. 952 15.0 9 000 52 M

þ

FIGURE 1.



PIGURE II.

American Standard Specifications for Steel.

ERRATA.

Errors in Text.

Page 20. Change the word subjecting to subjected on top line of page.

Page 22. Change the figures 96 to 100 in the eleventh line from top of page.

Page 22. Insert the word the before the word casting in the sixteenth line from top of page.

Page 25. Change the word in to on in the tenth line from bottom of page.

Page 26. Change the word of to on in both cases in the second line of the title of the table.

Page 31. Change the word of to on in the ninth line from top of page.

Page 39. Change the word forgings to forging in the fifteenth line from the bottom of page.

Page 89. Insert the figure 6 before the range in tensile strength 0,000-70,000 in the column headed "Medium

Errors in Punctuation.

Steel."

Page 65. Omit the comma (,) after the word beam in third line from top of page.

Page 69. Omit the comma (,) after the word beam in the tenth line from top of page.

Page 82. Change the colon (:) to a period (.) after the word thick, the last word on the page.

Page 83. In the second and third paragraphs from top of page the period (.) should be outside of the parenthesis, viz.:—(d). and (e).

Page 94. Omit the comma (,) after the word flaws in the next to the last line on the page.

Page 98. Change the colon (:) to a period (.) after the work thick in the eleventh line from top of page.

TABLE OF CONTENTS.

INTRODUCTION.—Reviews the efforts made in America to
standardise specifications for steel; the recent active
part taken in this work by the American Branch of
Committee No. 1 of the International Association for
Testing Materials, resulting in the adoption of
American Standards; and the possibility of adopt-
ing international standards at the next Congress of
I. A. T. M. in 1903
General Review of the Requirements Specified in the
American Standard Specifications, with the Reasons
which Governed the Committee in its Decisions 13
Process of Manufacture
Details Not Specified
Chemical Properties
Carbon Not Specified ,
Physical Properties 19
Tensile Strength, Vield Point, Elastic Limit 19
Riongation
Contraction of Area
Bending Tests
Drop Tests
Homogeneity Test
Percussive Test
Test Pieces and Methods of Testing
Standard Test Specimens, 8" and 2"
Comparison of Physical Properties on 2" and 10" Test
Specimens
Number and Location of Tensile Specimens 27
Annealing of Tensile Specimens

CONTENTS.

Methods for Tensile Tests	27
Test Specimens for Bending	27
Methods for Drop Tests	28
Method for Homogeneity Test	28
Method for Percussive Test	28
Samples for Chemical Analysis ,	28
Methods for Chemical Analysis	29
Pinish	29
Permissible Variations in Weight	30
Branding	30
Inspection , . , , , , ,	31
Review of Each of the Nine American Standard Speci-	
fications for Steel, with the Reasons which Goy-	
erned the Committee in its Decisions.	
Discussion of the Specification for Steel Castings ,	32
Ordinary Castings	32
Tested Castings	32
Discussion of the Specification for Steel Axles	34
Car, Engine Truck and Tender Truck Axles	
Driving-wheel Axles	35
Discussion of the Specification for Steel Forgings	37
Forgings of Soft or Low Carbon Steel	37
Forgings of Carbon Steel, not Annealed	37
Forgings of Carbon Steel, Oil-tempered or Annealed	38
Forgings of Nickel Steel, Oil-tempered or Annealed	38
Bending Tests	39
Test Specimens	39
Discussion of the Specification for Steel Tires	40
Deflections under Drop Test	41
Discussion of the Specification for Steel Rails	41
Process of Manufacture	43
Chemical Properties	43
Sample for Chemical Analysis	