

HOT STRIP MILL OPERATIONS, Volume VII

ROLLED in SCALE

DEDICATION

Rolled in Scale is the most interesting problem encountered on the hot rolling mills, if you can afford it has been expressed many times by the author with an added comment "**I can afford it**". The author originally began his consulting expertise on two areas, Coiling and Rolled in Scale because they were and are still the major problem areas on the hot strip, plate, and some structural and bar mills.

This book is dedicated to my wife Sally, who heard more about this subject than any hot strip mill operator in the world. She dusted my scale samples, listened to my theories, and spent many weeks and months alone while I traveled to another plant with a "unique" rolled in scale problem. The result of her compassion is a gift to you of the knowledge contained in this book.

This volume may be the last, or next to last, of the series on Hot Strip Mill Operations is also dedicated to the present and future Operating Superintendents and Managers who continue to have Rolled in Scale problems, because of some insignificant change or improvement in the operation of a hot rolling mill, which "tips the balance" in the operating process resulting in Rolled in Scale in the hope this volume results in a quicker solution to your problems than experienced by the author many years ago. Most of the Rolled in Scale problems are due to a lack of specific knowledge, and many reading this book do not understand the nature in the formation of scale or that descaling only solves a few types of rolled in scale problems.

This book is also dedicated to the many mill manufacturers, nozzle manufacturers, and operators who believe that "good" descaling solves all rolled in scale problems, because it took the author to many areas where higher pressures up to 300bar and better nozzles did not solve the rolled in scale problems on many mills. It was these people who forced the author to develop accurate **Descaling Effectiveness** formulas, and slowly find empirical factors for the **Descaling Difficulty** under different operating practices. The value of the **Descaling Effectiveness** formula and **Descaling Difficulty** factors made it possible to quickly determine if the rolled in scale was due to inadequate descaling power.

If time permits, one last volume on Reheating Furnace practices for good surface quality, increased heating capacity, and less scale loss may be written.

COPYRIGHT RESTRICTIONS

Copying of all, or parts, of this publication is prohibited except with the written permission of the author. Authors, who use short phrases, may do so if these phrases are identified, and reference is made to this publication. Authors who wish to use extended quotations, drawings, or pictures can only do so with the express written permission of the author.