

THE STOKER'S CATECHIMS

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649326488

The Stoker's Catechims by W. J. Connor

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

W. J. CONNOR

**THE STOKER'S
CATECHIMS**

THE STOKER'S CATECHISM

THE
STOKER'S CATECHISM

BY
W. J. CONNOR.



London:
E. & F. N. SPON, LIMITED, 57 HAYMARKET
New York:
SPON & CHAMBERLAIN, 123 LIBERTY STREET
1906



P R E F A C E.

THERE is no trade or calling that a working man is more handicapped in than that of a Steam Boiler Stoker; there are no books on stoking; the man leaving his situation is not anxious to communicate with the man who is taking his place anything that might help or instruct him; and the new man will be shy of asking for information for fear of being thought incapable for the post he is seeking; and the transfer takes place almost in silence, and the new man has to find out all the ways and means at his own risk, sometimes at his employer's expense.

My object is to instruct that man in his business without his knowing it, or hurting his very sensitive opinion on stoking and other matters; for I am well aware that it is only the least experienced who are the hardest to convince, or instruct—against their will. I have therefore ventured to devise this simple method of question and answer, which I have named

180693

"The Stoker's Catechism," which I hope may instruct and interest him.

I will not encumber this preface with my personal qualifications for this little work—the answers to the questions might suffice.

W. J. C.

THE STOKER'S CATECHISM.

1. *Question.*—How would you proceed to get steam up in a boiler ?

Answer.—Having filled the boiler with water to the usual height, that is to say, about four inches over the crown of the fire-tube, I throw in several shovelfuls of coal or coke towards the bridge, left and right, keeping the centre clear; then I place the firewood in the centre, throw some coals on it, light up, and shut the door. Then I open the side-gauge cocks to allow the heated air to escape, and keep them open till all the air has cleared out and steam taken the place of it; by this time the fire will require more fuel, and when the steam is high enough I connect her by opening the stop-valve a little at a time till it is wide open and ready for work.

2. *Question.*—Supposing there are boilers working on each side of the one you got steam up in, how would you act ?

Answer.—I would light the fire by putting in a few shovelfuls of live coal from one of them instead of using firewood ; that is all the difference I would make.

3. *Question.*—What is the cause of the rapid motion of the water in the gauge-glass at times ? Is that motion general throughout the boiler ?

Answer.—No ; air enters the boiler with the feed-water, and the gauge-glass tube being in the vicinity of the incoming water, some of the air enters the glass and flies up rapidly through the top cock and into the boiler again ; in fact there is very little motion of the water in the boiler at any time while working. I have proved this to be so, and in this manner : the boiler cleaners having finished the cleaning, hurriedly scrambled out of the boiler and left several tools they had been using on the crown of the firebox, namely, a bass hand brush, a tin can, and a tin candlestick, and a small iron pail ; the manhole cover was put on and boiler filled and put to work before the things were thought of, and then it was too late and they had to remain there until the next cleaning time, which was thirteen weeks ; and when the boiler was at last blown out and the manhole cover removed, the things were on the crown of the

fire-box exactly as they were left three months previously. In order to satisfy myself of this, to me, extraordinary discovery, I placed several articles on the crown of the fire-box, things that could not stop up the blow-off pipe if they were swept off, and got up steam as usual, and after three months' hard steaming I blew out the water and steam, took off the manhole cover, and there were the things as I had left them thirteen weeks previously; of course they were all coated with fine mud, but no signs of having moved a hair's breadth.

4. *Question.*—But water in an open cauldron with a fire under it, as in the steam boiler, will madly sweep the sides and bottom with terrific ebullition. How would you account for the great agitation in the open cauldron while the steam boiler had hardly any, although both vessels had fierce fires under them?

Answer.—In the matter of the open cauldron the action of the water has no resistance but that of the atmosphere, whereas in the steam boiler the movement of the water is resisted from the moment it is heated, for then a vapour rises above it, and, as the heat increases, the resistance to the movement of the water is proportionally increased, and as the heat of