AS 1853—1983

Australian Standard®

Automatic oil and gas burners—Mechanical draught

[Title allocated by Defence Cataloguing Authority:
BURNER: GAS AND OIL (Automatic, Industrial or Commercial)
... NSC 4530]

This Australian standard was prepared by Committee ME/21, Industrial Fuel-fired Equipment. It was approved on behalf of the Council of the Standards Association of Australia on 27 June 1983 and published on 5 September 1983.

The following interests are represented on Committee ME/21:

Australian Gas Association

Australian Institute of Energy

Australian Institute of Petroleum Limited

Bureau of Steel Manufacturers of Australia

Confederation of Australian Industry

Department of Labour and Industry, Victoria

Department of Mines and Energy, Northern Territory

Department of Transport and Construction

Heating and Cooling Industry Association of Victoria

Insurance Council of Australia

Metal Trades Industry Association of Australia

Metropolitan Fire Brigades Board, Melbourne

University of Melbourne

This Standard was issued in draft form for comment as DR 82112.

AS 1853—1983

Australian Standard®

Automatic oil and gas burners—Mechanical draught

First published 1976
Second edition 1983

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 3102 9

PREFACE

This edition of this standard was prepared by the Association's Committee on Industrial Fuel-fired Equipment to supersede AS 1853—1976, Rules for the Design and Construction of Single Automatic Oil and Gas Burners and Their Application to Boilers.

The reference standard used by earlier boiler codes had been a section of AS CB5 which gave basic rules for oil-firing. This was replaced in 1973 by AS 1375, SAA Industrial Fuel Fired Appliances Code, which became the basic standard for the entire range of industrial oil-fired or gas-fired equipment. While that standard covered the general case very well, of necessity it dealt with broad principles; therefore, it was decided that a specialist standard was needed, to detail the specific requirements for burner systems on small and medium boilers of the type that usually operate automatically.

It was found as drafting proceeded, that the resulting standard fell naturally into two parts, one being a technical specification for automatic burners which would incorporate the best technology currently available, the second being how to apply such a burner to the boilers in question. It was recognized at the time that the automatic burner being described was suitable for a wider field of applications than boilers, but time did not permit the possibilities to be explored and developed, so AS 185—1976 had a basic orientation towards boilers.

Subsequently an additional need arose for a control system having a higher level of sophistication, to cater for a class of boilers that had beome known as 'unattended'. This development caused a reassessment of subject boundaries and committee responsibilities, with the result that the two subjects of an automatic burner specification on the one hand and boiler management and control systems on the other were separated, the former to remain with the Committee on Industrial Fuel-fired Equipment, the latter being transferred to the Committee on Boilers and Unfired Pressure Vessels.

Thus, this edition is purely a specification for a high quality automatic burner for industrial use, be it for a boiler, furnace, oven or any similar combustion application. In effect, it describes how the basic burner control functions prescribed in AS 1375 may be carried out automatically. Amongst other things, it requires of the burner an ability to accept certain control or shutdown signals from the appliance to which it is attached, but the manner in which those signals are generated by the appliance or boiler is a matter for other standards.

This standard has no legal authority in its own right, but may acquire legal standing in one or more of the following circumstances:

(a) Adoption by a Statutory Authority having jurisdiction.

(b) Adoption by a purchaser as a required standard of construction when placing a contract.

(c) Adoption when a supplier or contractor states that equipment is in accordance with it.

Adoption by a Statutory Authority would probably occur indirectly, e.g. it might be referred to by AS 1375 or by AS 1200, SAA Boiler Code, each of which would itself be adopted directly by an Authority. In any case, the standard may need to be read in conjunction with, but will not take a precedence over, any statutory regulations that may be applicable in the area of installation.

CONTENTS