

FUME MINIMISATION GUIDELINES

Welding, Cutting, Brazing and Soldering

INTRODUCTION

1. ABOUT THESE GUIDELINES

These guidelines are based on research supported by the organisations listed at the end of this introduction. The aim of the research was to establish which processes generated fume at levels which would need to be controlled to comply with the requirements of the Hazardous Substances Regulations and to provide advice on the control measures which could be introduced to achieve this. Details of the legislation are summarised in Guideline 1.

Guidelines 2 to 16 provide the advice on control measures.

Controlling the level of operators' exposure to fume is the primary focus of these Guidelines. Depending on the workplace, it may also be necessary to protect personnel, other than operators, from these fumes. As workplaces differ so widely, it has not been possible to develop specific advice for this protection. Some controls, such as local exhaust ventilation or well designed mechanical general ventilation, may protect other staff as well as the operator whereas controls such as personal protective equipment or breathing zone ventilation, such as a fan supplying a cross draft of air for the welder, will not protect staff adjacent to the operation. Some advice on general workshop ventilation is included in Guideline 2.

As with all documents of this nature, the guidelines are dependent on feedback from industry and other interested parties. Suggestions on improvements to these guidelines are welcome and should be addressed to the WTIA.

2. INTENT OF THESE GUIDELINES

The use of these Guidelines cannot guarantee full compliance with the Hazardous Substances Regulations. By following the methodology a workplace will lessen or mitigate the risk of non compliance. Further professional assistance, for example by occupational hygienists or ventilation engineers, may be advisable in those circumstances where the Guidelines may not be entirely applicable or unusual conditions prevail.

3. TABLE OF CONTENTS

Introduction

Guideline 1 : Hazardous Substances Regulations

Guideline 2 : Fume Control Options

Guideline 3 : Materials

Guideline 4 : Manual Metal Arc Welding (MMAW)

Guideline 5 : Gas Metal Arc Welding (GMAW)

Guideline 6 : Gas Tungsten Arc Welding (GTAW)

Guideline 7 : Flux Cored Arc Welding (FCAW)

Guideline 8 : Hardfacing

Guideline 9 : Plasma Cutting

Guideline 10 : Oxy-Fuel Cutting

Guideline 11 : Low Fume Level Processes

Guideline 12 : Brazing and Soldering – Plumbing Industry

Guideline 13 : Soft Soldering – Electrical / Electronic Industry

Guideline 14 : General Soft Soldering

Guideline 15 : General Industrial Brazing

Guideline 16 : High Temperature Braze Welding

4. ACKNOWLEDGEMENTS

These guidelines have been prepared by the Working Group on Fume, comprising representatives from:

Industry,
Occupational Health and Safety state bodies,
Australian Aluminium Council,
Australian Institute of Steel Construction,
Australian Stainless Steel Development Association,
Australian Workers Union,
Cooperative Research Centre for Materials Welding and Joining,
Copper Development Association of Australia,
Commonwealth Scientific and Industrial Research Organisation,
Nickel Development Institute, and
Welding Technology Institute of Australia.

Guidelines are based on the results of a fume assessment project carried out in 1997 as part of a Research Project of the Cooperative Research Centre for Materials Welding and Joining.

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