

THE ENGINEERING EQUIPMENT AND MATERIALS USERS ASSOCIATION

SPECIFICATION FOR THE FABRICATION OF NON-PRIMARY STRUCTURAL STEELWORK FOR OFFSHORE INSTALLATIONS

PUBLICATION N° 197 : 1999

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THE ENGINEERING EQUIPMENT AND MATERIALS USERS ASSOCIATION

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FOREWORD

Developed by the EEMUA Materials for Offshore Service Technical Committee (now merged with the Materials and Fabrication Committee to form the Materials Technology Committee), this Specification covers the construction of offshore steel structures for installation primarily within the United Kingdom Continental Shelf. It may also be applied to other geographic areas when so desired by the Purchaser, but account would need to be taken of alternative and/or additional requirements which may be specified by local statutory authorities.

The structure of the document follows that of EEMUA Pub. 158. The requirements specified generally accord with the recommendations contained in the UK Health and Safety Commission document 'Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996', and should be read in conjunction with BS EN ISO 13819.

1 INTRODUCTION

1.1 Scope

This Specification defines the basic requirements for fabrication work on non-primary steel structures (see 1.2 (k) below for definition) of offshore installations. This will normally include, but not be limited to, the items listed in Table 1 (Sec. 8).

It should be noted that the attachment by welding of non-primary to primary steelwork comes within the scope of EEMUA Pub 158.

This Specification may also be used for modifications to existing structures, subject to the limitations imposed by the original materials and fabrication techniques.

1.2 Definitions

Throughout this Specification, the following definitions apply:

- (a) The 'Purchaser' means the client who has placed the contract for construction.
- (b) The 'Contractor' means the fabricator to whom the contract has been awarded.
- (c) 'Sub-contractor' means a fabricator to whom the Contractor awards any part of the work.
- (d) 'Welding personnel' / 'welder' include welders employing manual and semi-automatic techniques and operators of mechanised welding machines.
- (e) 'Shall' is used to indicate that the Contractor is required to take action.
- (f) 'Should' is used to indicate that the Contractor is advised to take action.
- (g) 'May' is used to indicate that the Contractor is permitted to do something, or that the Purchaser reserves the right to do something, according to context.
- (h) 'Approved' / 'approval', unless otherwise qualified, means formal, written agreement by the Purchaser to a proposal by the Contractor.
- (i) 'Carbon equivalent' (CE) is based on the formula:

$$CE = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15.$$
- (j) 'Agreement' is a verbal or written response from the Purchaser confirming concurrence with a proposal by the Contractor.
- (k) 'Primary structure' means all those components of offshore installations the failure of which would seriously endanger the safety of the installation; this includes all attachments welded to the primary structure. 'Non-primary' means all other components.
- (l) 'Drawings' are design drawings, or shop drawings approved for construction.

1.3 Abbreviations

The following abbreviations are used in this Specification with meanings indicated below:

AC : alternating current

AWS	:	American Welding Society
BS/BSI	:	British Standard/s Institution
CE	:	carbon equivalent
COSHH	:	Control of Substances Hazardous to Health
CSWIP	:	Certification Scheme for Welding Inspection Personnel
ECIA	:	Engineering Construction Industries Association
EN	:	European Standard
GMAW	:	gas metal arc welding
GSFCAW	:	gas shielded flux cored arc welding
GTAW	:	gas tungsten arc welding
HAZ	:	heat affected zone
HSC	:	[UK] Health and Safety Commission
HV	:	Vickers hardness
ISO	:	International Organization for Standardization
MPI	:	magnetic particle inspection (or examination)
NDT	:	non-destructive testing
OCPCA	:	The Oil and Chemical Plant Constructors' Association (now ECIA)
PCN	:	Personnel Certification in Non-destructive Testing
prEN	:	'pre-' (i.e. draft) EN
PWHT	:	post-weld heat treatment (or treated)
SAW	:	submerged arc welding
SI	:	International System of Units
SMAW	:	shielded metal arc welding
SSFCAW	:	self-shielded flux cored arc welding
TS	:	tensile strength (ultimate strength)

1.4 Units

SI units are used throughout this Specification.

'Bar' signifies gauge pressure.

1.5 Glossary of Technical Terms

The following technical terms are used within this Specification with the meanings indicated:

- | | | | |
|-----|-------------------|---|--|
| (a) | Tubular | : | an assemblage of cans or seamless pipes forming a member or part of a member. |
| (b) | Weld pass | : | a single progression of welding or surfacing along a joint or substrate. The result of a pass is a weld bead or layer. |
| (c) | Single-sided weld | : | a joint welded from one side only. |
| (d) | Double-sided weld | : | a joint welded from both sides irrespective of the weld preparation. |
| (e) | Flaw | : | the indication of an imperfection or discontinuity revealed by NDT. |
| (f) | Defect | : | an unacceptable flaw. |