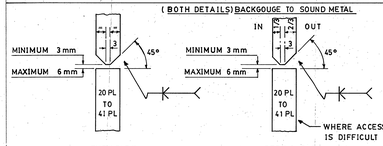
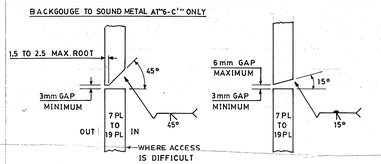
GMAWP FCAW SEMI-AUTOMATIC AVEC — SAW AUTOMATIC — MANUAL SMAW — GMAWP - FCAW SEMI OR AUTOMATIC & MANUAL SMAW — INTERMITTENT

DETAIL '5-E'
EDGE PREPARATION: FOR PLATE 15 MM & UNDER

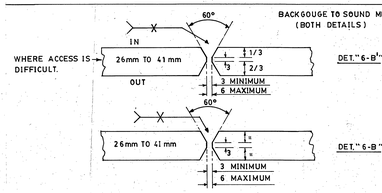
L.A. HI-TENSILE .045 ø 1/16" SOUS PROTECTION GAZEUSE 95% ARGON 5% CO_2
FLUXCORE 1/16" SOUS PROTECTION GAZEUSE CO_2
LATTE SUPPORT 3 M - S.J. 8069 ou S.J. 8073



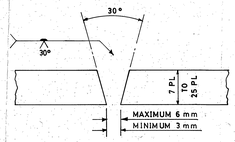
EDGE PREPARATION WITH CERAMIC BACKING
HORIZONTAL POSITION



ONE SIDE EDGE PREPARATION WITH CERAMIC BACKING
HORIZONTAL POSITION

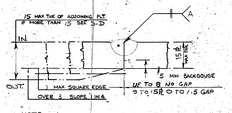


EDGE PREPARATION WITH CERAMIC BACKING
VERTICAL & FLAT POSITION



ONE SIDE EDGE PREPARATION WITH CERAMIC BACKING
VERTICAL & FLAT POSITION

SOUDÉ DES 2 COTÉS AVEC ARC SUBMERGÉ SUR GRADE "A"
OXWELD 36 3/16" ou 8/32" SOUS FLUX LINDE 585

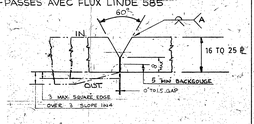


NOTE:
12.5 TO 15 BACKGOUGE 5 MM MIN
UNDER 12.5 NO BACKGOUGE

CURRENT
9.5 TO 17.5 PLATE - 600 TO 650 AMPS - 32 VOLTS 340-360 cm/MIN
15 PLATE - 700 TO 850 AMPS - 32 34 VOLTS 35-45 cm/MIN

DETAIL '5-E'
EDGE PREPARATION: FOR PLATE 15 MM & UNDER

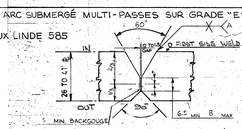
SOUDÉ DES 2 COTÉS AVEC ARC SUBMERGÉ SUR GRADE "E", "E.H." ou "A"
OXWELD 36 3/16" MULTI-PASSES AVEC FLUX LINDE 585



CURRENT
700 TO 850 AMPS - 32 TO 34 VOLTS 350-450 cm/MIN

DETAIL '5-D'
EDGE PREPARATION FOR PLATE 16 MM TO 25 MM

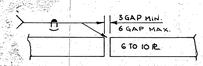
SOUDÉ DES 2 COTÉS AVEC ARC SUBMERGÉ MULTI-PASSES SUR GRADE "E", "E.H." ou "A"
OXWELD 36 3/16" AVEC FLUX LINDE 585



CURRENT
850 TO 950 AMPS - 32 TO 36 VOLTS 350-450 cm/MIN

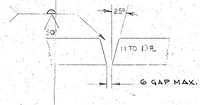
DETAIL '5C'
EDGE PREPARATION FOR PLATE 26 MM TO 41 MM

PROCÉDÉ "ONE SIDE" AVEC ARC SUBMERGÉ SUR GRADE "A"
OXWELD 36 3/16" AVEC FLUX M.F.38 SUR LATTE SUPPORT FAB-1



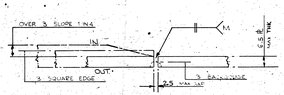
DET 5-B
METHOD ONE SIDE
F.A.B. PROCESS

PROCÉDÉ "ONE SIDE" AVEC ARC SUBMERGÉ SUR GRADE "A"
OXWELD 36 3/16" AVEC FLUX M.F.38 SUR LATTE SUPPORT FAB-1



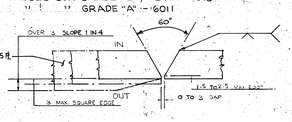
DET 5-A
METHOD ONE SIDE
F.A.B. PROCESS

MULTI-PASSES SUR GRADE "E" & "E.H." - 7018
" " " GRADE "A" - 6011



DETAIL '4-E'
EDGE PREPARATION FOR PLATE 6.5 MM & UNDER WITH 3 MM BACKGAUGE

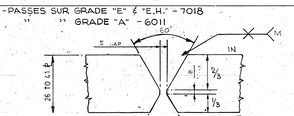
MULTI-PASSES SUR GRADE "E" & "E.H." - 7018
" " " GRADE "A" - 6011



NOTE: BACKGOUGE TO SOUND METAL

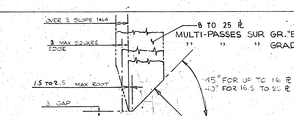
DETAIL '4-D'
EDGE PREPARATION FOR PLATE 7 MM TO 25 MM
DOWNHAND, VERTICAL POSITION

MULTI-PASSES SUR GRADE "E" & "E.H." - 7018
" " " GRADE "A" - 6011



NOTE: BACKGOUGE TO SOUND METAL

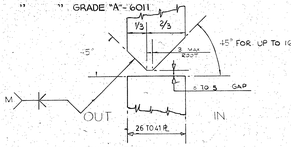
DETAIL '4C'
EDGE PREPARATION FOR PLATE 26 MM TO 41 MM



NOTE: BACKGOUGE TO SOUND METAL

DETAIL '4-B'
EDGE PREPARATION FOR PLATE 8 MM TO 25 MM
HORIZONTAL WELDING, WELDING OF SHELL TO BILGE PLATE, LONGITUDINAL & FABRICATED SECTION, AND PLATE BY PLATE.

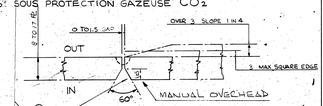
MULTI-PASSES SUR GRADE "E" & "E.H." - 7018
" " " GRADE "A" - 6011



NOTE: BACKGOUGE TO SOUND METAL

DETAIL '4-A'
EDGE PREPARATION FOR PLATE 26 MM TO 41 MM
HORIZONTAL WELDING

OUT-LINE PASSE AVEC ARC SUBMERGÉ SUR GRADE "E", "E.H." ou "A"
OXWELD 36 3/16" ou 9/32" SOUS FLUX LINDE 585
FLUXCORE 1/16" SOUS PROTECTION GAZEUSE CO_2

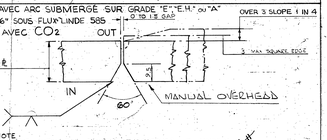


NOTE
FOR AUTOMATIC PROCESS BACKGOUGE 5 MINIMUM FOR 12.5 PLATE & OVER
FOR MANUAL OR SEMI-AUTOMATIC PROCESS BACKGOUGE TO SOUND METAL

(IN) MULTI-PASSES SUR GRADE "E" & "E.H." - 7018
" " " " GRADE "A" - 6011

DETAIL '3-E'
EDGE PREPARATION FOR PLATE 8 MM TO 17 MM
OVERHEAD & FLAT, ON TANK TOP & ALL DECKS

OUT-LINE PASSE AVEC ARC SUBMERGÉ SUR GRADE "E", "E.H." ou "A"
OXWELD 36 3/16" ou 9/32" SOUS FLUX LINDE 585
FLUXCORE 1/16" AVEC CO_2

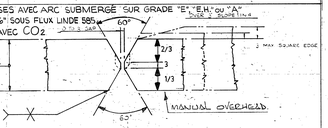


NOTE
FOR AUTOMATIC PROCESS BACKGOUGE 5 MINIMUM FOR MANUAL OR SEMI-AUTOMATIC PROCESS BACKGOUGE TO SOUND METAL

(IN) MULTI-PASSES SUR GRADE "E" & "E.H." - 7018
" " " " "A" - 6011

DETAIL '3-D'
EDGE PREPARATION FOR PLATE 17.5 MM TO 63.5 MM
OVERHEAD & FLAT, ON TANK TOP & ALL DECKS.

(OUT) MULTI-PASSES AVEC ARC SUBMERGÉ SUR GRADE "E", "E.H." ou "A"
OXWELD 36 3/16" SOUS FLUX LINDE 585
FLUXCORE 1/16 AVEC CO_2

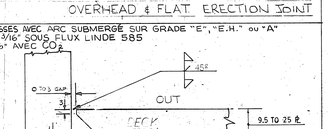


NOTE
FOR AUTOMATIC PROCESS BACKGOUGE 5 MINIMUM
FOR MANUAL OR SEMI-AUTOMATIC PROCESS BACKGOUGE TO SOUND METAL

(IN) MULTI-PASSES SUR GRADE "E" & "E.H." - 7018
" " " " GRADE "A" - 6011

DETAIL '3-C'
EDGE PREPARATION FOR PLATE 24 MM TO 41 MM
OVERHEAD & FLAT ERECTION JOINT

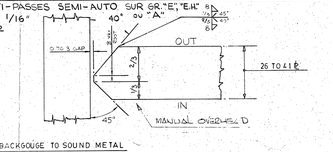
(OUT) MULTI-PASSES AVEC ARC SUBMERGÉ SUR GRADE "E", "E.H." ou "A"
OXWELD 36 3/16" SOUS FLUX LINDE 585
FLUXCORE 1/16" AVEC CO_2



(IN) MULTI-PASSES SUR GRADE "E" & "E.H." - 7018
" " " " GRADE "A" - 6011
PROCEDURE AND EXECUTION TO THE SURVEYORS SATISFACTION

DETAIL '3-B'
EDGE PREPARATION FOR PLATE 9.5 MM TO 25 MM
WHERE FULL PENETRATION IS REQUIRED

(OUT) MULTI-PASSES SEMI-AUTO SUR GR "E", "E.H." & FLUXCORE 1/16" AVEC CO_2



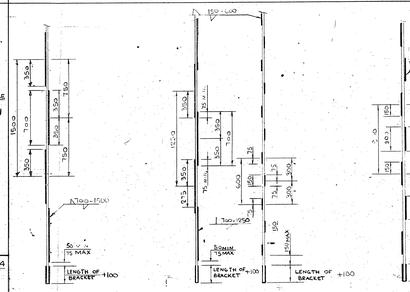
NOTE: BACKGOUGE TO SOUND METAL

(IN) MULTI-PASSES SUR GRADE "E" & "E.H." - 7018
" " " " GRADE "A" - 6011

DETAIL '3-A'
EDGE PREPARATION FOR PLATE 26 MM TO 41 MM
WHERE FULL PENETRATION IS REQUIRED

DOWNHAND POSITION — OVERHEAD & DOWNHAND POSITION

INTERMITTENT



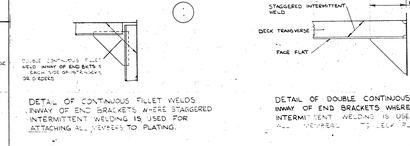
THE REQUIREMENTS OF PART 3 CHAPTER 10 SECTION 2.6 OF THE RULES TO BE COMPLIED WITH

DETAIL 'E-D'
GRAVITY & MANUAL STAGGERED FILLET WELDING

NOTE: USE OF GRAVITY WELDING FOR EACH LOCATION MENTIONED TO BE CONFIRMED BY CLASSIFICATION SOCIETY.

1. FOR PANELS, DECK, UPPER SHELL, TRANSV. & LONGITUDINAL MAIN BULKHEADS USE 700-1500 GRAVITY WELDING OR 150-600 MANUAL WELDING.
2. FOR MINOR BULKHEADS (BETWEEN DECKS) & SUPERSTRUCTURE USE KOBE L.B. 26V. VERTICAL DOWN, OR G.M.A.W.P. (GAS METAL ARC WELDING PULSED).

END CONNECTIONS



DETAIL OF CONTINUOUS FILLET WELDS AWAY OF END BRACKETS WHERE STAGGERED INTERMITTENT WELDING IS USED FOR ATTACHING ALL STIFFENERS TO PLATING.

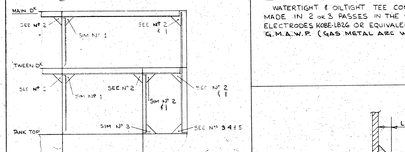
DETAIL OF DOUBLE CONTINUOUS FILLET WELDS AWAY OF END BRACKETS WHERE STAGGERED INTERMITTENT WELDING IS USED FOR ATTACHING ALL STIFFENERS TO PLATING

DETAIL OF DOUBLE CONTINUOUS FILLET WELDS AWAY OF END BRACKETS WHERE STAGGERED INTERMITTENT WELDING IS USED FOR ATTACHING WEB FRAMES TO SHELL PLATING

DETAIL OF DOUBLE CONTINUOUS FILLET WELDS AWAY OF SIDE FRAME CONNECTION TO TANK TOP WHERE STAGGERED INTERMITTENT WELDING IS USED FOR ATTACHING WEB FRAMES TO SHELL

DETAIL OF SHELL FRAME CONNECTION TO TANK TOP BRACKETS

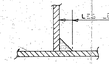
DETAIL '2-B'



KEY PLAN INDICATING TYPICAL LOCATION OF END CONNECTION

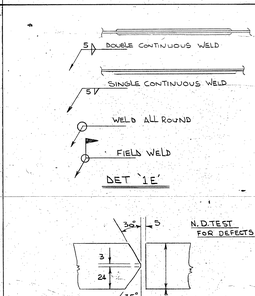
VERTICAL DOWN

WATERTIGHT & OILTIGHT TEE CONNECTIONS SHALL BE MADE IN 2 OR 3 PASSES IN THE VERTICAL DOWN POSITION ELECTRODES KOBE-LB26 OR EQUIVALENT TO BE USED OR G.M.A.W.P. (GAS METAL ARC WELDING PULSED).



WELD SIZES INDICATED REFER TO LEG LENGTH

DETAIL 'A'



EDGE PREPARATION FOR PLATE 42°M TO 60°M

MISCELLANEOUS DATA

TOTAL AREA OF THIS DRAWING: 8.75 SQ FEET
ESTIMATED WEIGHT: LBS.

FINISHED WELD TO BE TO THE SURVEYORS SATISFACTION
THIS ARRANGEMENT TO DEPEND UPON LOCATION AND IS TO BE ADOPTED ONLY WITH THE CONSENT OF THE SURVEYOR:
ALL ELECTRODES AND CONSUMABLES TO BE OF APPROVED TYPE AND MANUFACTURE AND INCLUDED IN THE "LIST OF APPROVED ELECTRODES FOR WELDING IN HULL CONSTRUCTION" ISSUED BY THE SOCIETY.

FOR LIST OF MATERIAL REFER TO:
WELDING PROCEDURES TO SURVEYOR'S SATISFACTION

FOLD LINE

NO.	DATE	DESCRIPTION	BY
1		WELDING PROCESS ADDED	KMM 84-5-17

REVISIONS

SUBMISSIONS

	SUB	APP.	REV.	REV.	REV.	REV.	REV.
LLOYDS	83-12-06	84-1-18					
C.S.I.	84-1-13						
OWNER'S	83-12-23	84-1-23					

DISTRIBUTION	
PRODUCTION MANAGER	
SHIP MANAGER	1
OWNER'S SURVEYOR	1
PLANNING ENG'R	
ESTIMATOR	
ENGINEERING SUPER'T	
ELECTRICAL SUPER'T	
HULL SUPER'T	
ASST HULL SUPER'T	
ELECTRICAL DEPT	
OUTFITTING ENG'R	
HULL DWG. OFFICE	2
PIPE DWG OFFICE	1
ELECT DWG. OFFICE	
CARPENTER SHOP & DET.	
HULL PLATING & DET.	
ENGINEERING DEPT & DET.	
HULL CONSTRUCT & DET.	
MAIN LOBBY	
PIPE SHOP	
MISC. STORAGE	2
WELDER'S TEST	
ATTENDANCE ETC.	
HULL SUPT. — PIPE	
LINE SUPT.	1
S. PAULHUS	3
G. PAULHUS	3

MARINE INDUSTRIES LIMITED
SOREL - P.Q. - CANADA

TYPE 1100 NAVAIDS TENDER/LIGHT ICEBREAKER

WELDING STANDARDS

MADE	APPROVED	DRAWING	REV
B.P.H		450 / 451	1
CHECKED	SCALE	112-50	SHEET 1 OF 1
	DATE 83-12-06		

112-5054 REV 1

METRIC STANDARD - 84-151