

PLAN

DETAIL -1

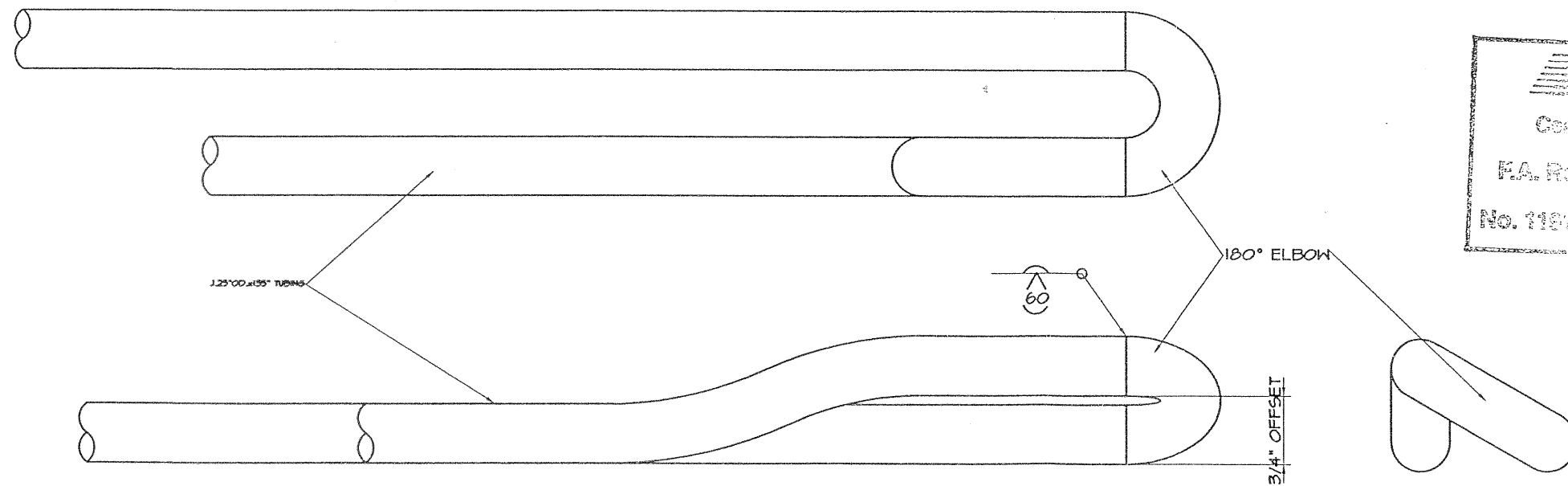
GENERAL SPECIFICATIONS:

TUBING: .135" THK. ASME SA-178, GRADE A 1.25" DIAMETER

DESIGN DATA:

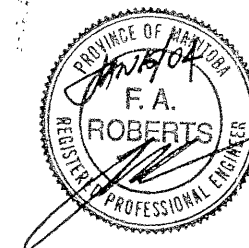
DESIGN CODE: CSA B51 ASME BOILER & PRESSURE VESSEL
 CODE SEC I & SEC IV
 DESIGN PRESSURE: 200 PSIG
 OPERATING PRESSURE: 90 PSIG
 LIMITED BY: TUBE WALL
 FINAL HYDROSTATIC TEST: 300 PSIG, HOLD 1 HOUR @ 65°F
 BASED ON:
 HEAT TREAT:
 CORROSION ALLOWANCE: NONE

RADIOGRAPHY: PER ASME SEC I	RT1	RT2	RT3	RT4	NONE
LONG SEAM HEMI HD-SHELL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CATEGORY B WELDS					
CONE TO SHELL	FULL LTH.	FULL LTH.	SPOT	-----	
INTERMEDIATE GIRTH	FULL LTH.	PARTIAL	SPOT	-----	
NOZZLE > 10" OR > 1.125	FULL	PARTIAL	SPOT	-----	
NOZZLE < 10" OR < 1.125	N/A	N/A	N/A	-----	
JOINT EFFICIENCIES (%)					
LONG SEAM	100	100	85	70	100
SEAMLESS	100	100	100	100	100
HEAD-SHELL (HEMI)	90/100	90/100	80/85	80	85/90
STRESS REDUCTION FACTOR					
SHELL (SMLS PORTION)	100	100	85	80	80
HEAD (SMLS)	100	100	85	80	80



DETAIL -1
 OFFSET RETURN BEND

Professional Engineer
 F.A. Roberts & Associates Ltd.
 No. 1181 Exp. April 30, 2004



Signature: [Handwritten Signature]
 Date: [Handwritten Date]

A	ISSUED FOR APPROVAL	JC	JAN.12/04
NO.	REVISIONS	BY	DATE
CLIENT	TOMMY'S WELDING LTD		
PROJECT	CITY OF WINNIPEG NORTH END WATER		
LOCATION	POLLUTION CONTROL CENTRE WINNIPEG, MANITOBA		
DRAWING TITLE	BOILER No. 3 REFURBISHMENT		
DGN/DWN BY	JC	DATE	JAN/04
CHECKED BY	FAR	DATE	-
CONTRACT	2004005	DWG NO.	SI
REVISED			