




**Design No. 3977A  
Licensing Drawings**

**Modification No. M869**

Title	Modification of Design No. 3977A Licensing Drawings	Number	M869
		Issue	Issue A
		File Reference	M869-A-3977A.docx
Compiled	 S Donald	Checked	 S H Bryson
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Drawing No	Revised Issue	Title and Summary of Changes	Reason for Change
1C-5940	F	<p><u>Cover Sheet for Safkeg HS Design No 3977A</u> Issue raised from E to F</p> <p>1C-5940 raised in issue from E to F 0C-5941 raised in issue from D to E 0C-5942 raised in issue from B to C 1C-5945 raised in issue from C to D 1C-5946 raised in issue from D to E 2C-6176 issue D added</p>	<p>The drawing list has been updated to reflect the latest issues of the drawings &amp; to include insert Design No 3987.</p>
0C-5941	E	<p><u>Safkeg HS Design No 3977A</u> Issue raised from D to E</p> <p>Item 10 added</p>	<p>Addition of insert Design No 3987 (drawing no.2C-6176). This stainless steel insert with PTFE liner is required because the customer (MURR) would like to ship liquid contents in the future.</p>
0C-5942	C	<p><u>Keg Design No 3977</u> Issue raised from B to C</p> <p>Separate view of item 16 added including more explicit dimensions. Ref detail A: M12, 23±3 &amp; 10±2 dimensions removed. "10 +0.5/-0.0 flange only" dimension added. "M16x2-6H hole in flange" dimension was "M16".</p> <p>Item 19 added to item list. "Item 16 (stud) shall be permanently locked &amp; sealed in position in item 2 (flange) using item 19 (threadlocker)" note added.</p> <p>Ref item 16 material: "ASTM A479/A479M type 304L or ASTM A479/A479M UNS designation S21800" was "ASTM A479/A479M type 304L"</p>	<p>Dimensions from the manufacturing drawings have been added to the licensing drawings so that the NRC can better understand keg closure stud manufacture.</p> <p>The keg closure stud locking &amp; sealing adhesive details have been added in order to clarify how the studs are fixed in position.</p> <p>The customer (MURR) has been experiencing some galling problems with the M12 threads on the existing type 304L stainless steel keg closure studs. UNS designation S21800 (anti-galling stainless steel) has been added as an optional material for these studs in order to combat this problem. Replacing any damaged 304L studs with S21800 studs is acceptable because the minimum yield strength of S21800 (50 MPa) is twice that of 304L (25 MPa).</p>
1C-5945	D	<p><u>Containment Vessel Lid</u> Issue raised from C to D</p> <p>2.9 +0.3/-0.1 dimension was 2.9±0.1</p>	<p>Upper limit of dimension tolerance increased slightly to allow for use of two CV lids in which the o-ring groove widths</p>

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			were machined slightly oversize by mistake during the manufacture of the first production batch of the Safkeg HS.
1C-5946	E	<u>Containment Vessel Body</u> Issue raised from D to E  Ref detail A: 0.7±0.4 dimension added	This dimension has been added to specify more accurately the gap between the counter bore shoulder of the depleted uranium (item 3) & the stainless steel face directly above it. This gap has been identified as a weak point in the shielding of the containment vessel side wall now that insert Design No 3987 has been included in the SARP.