# Design No. 3979A
# Licensing Drawings Modifications
# (ref SARP CTR 2008/10 Rev 3)

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| Title | Design No. 3979A<br>Licensing Drawings Modifications<br>(ref SARP CTR 2008/10 Rev 3) | Number | CTR 2012/07 |
| | | Issue | Issue A |
| | | File Reference | CTR 2012-07-A.doc |
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| Drawing No | Revised Issue | Title and Summary of Changes | Reason for Change |
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| 1C-6040 | E | Cover Sheet for Safkeg LS Design No 3979A<br>Issue raised from D to E<br><br>1C-6040 raised in issue from C to E<br>0C-6043 raised in issue from A to B<br>1C-6044 raised in issue from C to E<br>1C-6045 raised in issue from C to D<br>1C-6046 raised in issue from C to D | The drawing list has been updated to reflect the latest issues of the drawings. |
| 0C-6043 | B | Cork Set for Safkeg LS<br>Issue raised from A to B<br><br>Ref note 1: "Material – Agglomerated composition cork produced with 2.0/0.5mm granulated cork and polyurethane binder" was "Material – Agglomerated cork".<br><br>Ref note 1: "Specific weight 250-290 Kg/m³ to ISO 7322 or in accordance with Croft procedure CP438" was "Specific weight 250-290 Kg/m³ to ISO 7322". | To improve the cork material specification by making it more specific whilst keeping it in line with the material used for both the prototype and production units.<br><br>The specific weight of a cork block supplied to Croft to be used for machining of the cork set was found to be out of specification. Croft has decided to have the specific weight of each block supplied checked to Croft procedure CP 438 to be certain that the specific weight always falls within specification. |
| 1C-6044 | E | Containment Vessel Design No 3980<br>Issue raised from D to E<br><br>Ref note 3: "12.5 bar gauge" was "10.5 bar gauge".<br><br>Ref items 5, 6 & 7: Figures 1, 2 & 3 added.<br><br>Ref items 5, 6 & 7 material: "EPM/EPDM" was "EPM".<br><br>Ref items 5 & 6: Note 5 added. | To conform with ASME Section III Article NB 6000 which specifies a test pressure of 1.25 x design pressure (i.e. 1.25 x 10 = 12.5).<br><br>The O-rings for the production units were procured from Parker. The Parker dimensional tolerances for these O-rings are slightly outside of the tolerances specified in BS 4518. Figures 1, 2 & 3 have been added in order to accommodate the Parker tolerances.<br><br>To increase the scope of the specification to include the actual O-rings procured from Parker during production. Both of these Ethylene Propylene rubbers are acceptable.<br><br>To include the option of testing moulded O-rings to ASTM D1414 as an alternative to testing moulded slabs to ASTM D2000, and thus include all of the actual test methods used during the testing of the O-rings for the production units. |

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| | | Ref items 5 & 6 "hardness/min tensile strength" figures in ASTM D2000 line call out: "810" was "710". | During the testing of moulded O-rings for use in the production units min ultimate elongation test failures of 172% & 162% were recorded (Industrial Testing Laboratory Services test reports L18656 & L18657, Physical Properties ASTM D1415-06). However the ultimate elongation figure is unimportant to the design. In order to remove this misleading result from future test reports "710" has been replaced by "810". Whether the hardness figure is "8" (80±5) or "7" (70±5) is unimportant because it is overridden by the "Z1" (75±5) part of the line call out. The min tensile strength figure "10" remains unchanged. ASTM D2000-08 (Table 6, BA Materials) gives the values for ultimate elongation for "710" and "810" as 250% min and 150% min respectively. Specifying "810" means that 172% & 162% min ultimate elongations will then be recorded as test passes. |
| 1C-6045 | D | <u>Containment Vessel Lid</u><br>Issue raised from C to D<br><br>Ref note 2: "ASME III Division 1 Subsection NB 2542" was "ASME III Division 1 Subsection NB 2532.1".<br><br>Ref item 3 material: "Lead alloy – see note 3" was "Lead to BS 3909/2".<br>Note 3 added. | <br><br>To correct the ultrasonic (UT) examination method of the stock material for the CV lid top, from the examination requirements for plate material to the examination requirements for bar material.<br><br>To allow the total impurities within the chemical composition of the lead shielding material to be double that specified in BS 3909/2 (to be increased from 0.25% to 0.5%), due to the chemical composition of the lead shielding material supplied for manufacture being slightly outside of the BS 3909/2 specification. |
| 1C-6046 | D | <u>Containment Vessel Body</u><br>Issue raised from C to D<br><br>Ref note 2a: "ASME III Division 1 Subsection NB 2542" was "ASME III Division 1 Subsection NB 2532.1".<br><br>Ref item 3 material: "Lead alloy – see note 3" was "Lead to BS 3909/2".<br>Note 3 added. | <br><br>To correct the ultrasonic (UT) examination method of the stock material for the CV flange/cavity wall, from the examination requirements for plate material to the examination requirements for bar material.<br><br>To allow the total impurities within the chemical composition of the lead shielding material to be double that specified in BS 3909/2 (to be increased from 0.25% to 0.5%), due to the chemical composition of the lead |

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| | | | shielding material supplied for manufacture being slightly outside of the BS 3909/2 specification. |