RRS Discovery Replacement Project

Pictures supplied by E.B. Cooper, Natural Environment Research Council, Project Officer RRS Discovery Replacement, National Oceanography Centre, European Way, Southampton, SO14 3ZH

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SALINOMETER ROOM
(3D)
GENERAL PURPOSE LABORATORY (3D)
# James Cook & new Discovery Compared

<table>
<thead>
<tr>
<th></th>
<th>Cook</th>
<th>Discovery</th>
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<tbody>
<tr>
<td>Length Overall:</td>
<td>89.50 m</td>
<td>99.70 m</td>
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<tr>
<td>Breadth:</td>
<td>18.60 m</td>
<td>18.0m</td>
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<tr>
<td>Draft:</td>
<td>5.50-5.70 m</td>
<td>6.50m</td>
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<tr>
<td>Displacement:</td>
<td>5368 t GRT</td>
<td>6075 t GRT</td>
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<tr>
<td>Class:</td>
<td>Lloyds +100A1, Ice 1C, FS, +LMC, UMS,</td>
<td>Lloyds +100A1, Ice 1D, +LMC, UMS, IWS, EP,</td>
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<tr>
<td></td>
<td>DP(AM) Research Vessel</td>
<td>DP(AM), NAV1, IBS,</td>
</tr>
<tr>
<td>Maximum Speed:</td>
<td>15 kts SS4</td>
<td>15kts SS2</td>
</tr>
<tr>
<td>Cruising Speed:</td>
<td>12 kts SS4</td>
<td>12kts SS4</td>
</tr>
<tr>
<td>Maximum Endurance:</td>
<td>50 days</td>
<td>50 days</td>
</tr>
<tr>
<td>Science &amp; Stores DW:</td>
<td>385T</td>
<td>380T</td>
</tr>
<tr>
<td>Scientific Berths:</td>
<td>32 singles</td>
<td>28 singles</td>
</tr>
<tr>
<td>Officers:</td>
<td>9 singles</td>
<td>12 singles</td>
</tr>
<tr>
<td>Crew &amp; Technicians:</td>
<td>13 singles</td>
<td>12 singles</td>
</tr>
<tr>
<td>Open Deck Spaces</td>
<td>446 m$^2$</td>
<td>432 m$^2$</td>
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<tr>
<td>(Afterdeck &amp; Stbd</td>
<td></td>
<td></td>
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<tr>
<td>Amidships)</td>
<td></td>
<td></td>
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<tr>
<td>Total Lab Areas:</td>
<td>277.5 m$^2$</td>
<td>388.8 m$^2$</td>
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RRS James Cook / Discovery Replacement Comparison

James Cook:
- L 89.5m; B 18.6m; D 5.5 – 5.7m;
- Displacement 5800 T

Discovery:
- L 99.7m; B 18.0m; 6.5m;
- Displacement 6075 T
Expected Outcome

- 50 days endurance (L 99.7m, B 18m, D 6.5m)
- Scientific Transit Speed – 12 knots maximum
- 24 Officers & Crew (includes 1 Training Berth)
- 28 Scientists & Technicians
- DP Capable (DP1) SS6/7
- Multidisciplinary
- Seismic capability
- Multibeam(s) & Sub Bottom profiler
- Minimal Ice Class – for hull life (Lloyds 1D)
- Overside/overstern lifting – 20 tonnes (JC 30 tonnes)
- Drop Keels
- Low URN but not ICES209
- Propulsion – 2 x Azimuthing Units Aft
  Azimuthing Thruster Fwd, Manoeuvring Thruster Fwd
- Oceanographic Winch Suite including Metal Free CTD Winch
Over side handling
RRS Discovery

Midship/aft Crane 250T.m

Aft Cranes 40T.m

Starboard Bull-horn Boom
Capacity – 20T
Max. Height – 4.5m

Starboard ‘A’ Frame
Capacity – 20t
Max. Height – 5m

Stern ‘A’ Frame
Capacity – 30t
Max. Height – 8m

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Milestones

2010
- Contract Award
- Keel Lay
- 1200T Steel pre-fabricated
- Main Generators Delivered

2011
- Launch
- Thrusters Delivered
- Winch Suite Delivered
- Start Main Generators

2012
- First Sea Trials
- Interim Delivery
- Deep Sea Trials Complete

2013

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