Jack QUARTERLY MAGAZINE SOUTHAMPTON BRANCH

**Black** 

WORLD SHIP SOCIETY

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Three masts are the requirement for a Royal Yacht; the Royal Standard is flown at the Main, the flag of the Royal High Admiral at the Fore and the Union Flag at the Mizzen. The ship when built had a gross tonnage of 5769gt and an overall length of just over 412ft with a maximum speed of 22.85kts. On 11 December 1997 **Britannia** was decommissioned at Portsmouth Naval Base in the presence of The Queen, The Duke of Edinburgh and fourteen senior members of The Royal Family.

Four months later, after intense competition from cities around the UK, the Government announced that Edinburgh was successful in its bid to become **Britannia**'s new home. She is now owned by The Royal Yacht **Britannia** Trust, a charitable organisation whose sole remit is the maintenance of **Britannia** in keeping with her former role. **Britannia** is now permanently moored in Edinburgh's historic port of Leith

## Black Jack - Spring 2007

Editor & Webmaster Neil Richardson 109 Stubbington Lane Fareham PO14 2PB 01329 663450 n.richardson@breathe.com Assistants Michael Page and Mike Lindsay

Black Jack is the newsletter for the Southampton Branch of the World Ship Society. Available separately for £5 inclusive of postage.

# **Branch Meetings**

Venue: Main Lecture Theatre Southampton Oceanography Centre Waterfront Campus European Way Eastern Docks Southampton All meetings commence 19.15 and the meeting room is o be vacated by 21.30.

## Honorary Branch Secretary

Rod Baker 29 Milbury Crescent Southampton SO18 5EN 02380 449972

## Chairman

John Lillywhite 1 Thornleigh Road Woolston SO19 9DH 02380 432181

#### Treasurer

Andrew Hogg "Debanker" Lyburn Road Hamptworth Salisbury SP5 2DP 01794 390502

#### Visits Organiser

Adrian Tennet 34 New Road Fair Oak SO50 8EN 02380 600197

Full details for all committee members can be found on the Southampton WSS website at www.sotonwss.org.uk

## 2007 Branch Meeting Programme

March 13<sup>th</sup> Suez Canal & North Africa **Bill Lawes** April 10<sup>th</sup> The Image of a Ship Bert Moody May 8<sup>th</sup> Lairds (Pt 1) 1805 - 1903 Philip Welsh June 12<sup>th</sup> **Magical Mystery Tour** Bernard McCall July 10<sup>th</sup> Ten Members – Ten Minutes August 9th Image Gallery. Slides, Prints' and Digital Images Members Evening

All contributions to BJ are gratefully received either by post, email, floppy disk or CD. Any article related to the Solent area would be much appreciated. BJ editor can reproduce any magazine or newspaper articles but preferred are articles by the branch – for the branch.

Any member who would prefer to receive the Branch Magazine Black Jack by email please contact the Editor. Colour printing costs are relatively high so all recent Black Jacks can be viewed all in full colour via the Branch website in pdf format.

www.sotonwss.org.uk

## **Subscriptions**

Now overdue for both the main society and local branch. Please pay the local treasurer direct for both as the local branch receives a percentage for branch funds.

Ordinary Membership £35 Branch Membership £8 (A deduction of £2 is available for those participating in the branch cruise.)

Please contact the treasurer with any queries.

## Ship Visits

Ship visits often become available at short notice and those wishing to participate should ensure their details are given to the Visits Organiser and kept accurate. All members participating in visits organised by the branch do so at their own risk and be aware that ships and dock areas may have trip and other safety hazards. News from ASSOCIATED BRITISH PORTS

# SOUTHAMPTON BUOYED BY CRUISE SHIPS AND CONTAINERS

Associated British Ports (ABP) has announced its full year results for 2006, documenting the strong year that its Port of Southampton had in many of its most important trades. Southampton's cruise operations had a particularly good year in 2006, with the port welcoming more than 250 cruise-ship calls and a record 738,000 international cruise passengers (2005: 702,000). In addition, the port won an award in March for 'Best Turnaround Port Operations' at the world's largest cruise conference in Miami, Florida. To facilitate the continued growth in cruise traffic, ABP is now investing £9m in the expansion and enhancement of City Cruise Terminal, supported by a new seven-year agreement with Royal Caribbean Cruises Ltd (RCCL). The expanded terminal will open in April, in time for the inaugural season of RCCL's 3,800-passenger cruise ship, *Navigator of the Seas*.

During 2006, Southampton's container operations benefited from strong growth in throughput, particularly during the second half of the year. At the end of the year, the port had handled 1.5 million TEU (twenty-foot equivalent units) – an increase of 9.1 per cent on the previous year. From September, Southampton Container Terminals (SCT) – of which ABP owns 49 per cent – consolidated all Grand Alliance Atlantic services at Southampton, resulting in a further six weekly deep-sea services to the port. On the back of this business win, SCT earmarked some £15m for two new quayside gantry cranes and eight new straddle carriers to increase its capacity to 2m TEU. In August, SCT announced its plans to operate a fifth container-handling transhipment berth, featuring a dedicated 100-tonne mobile harbour crane. Operational since October, the berth has won four additional weekly feeder-vessel services.

In anticipation of substantial future growth in container traffic through Southampton, in September ABP announced plans to increase container capacity at the port by some 85 per cent. These plans focus on the sustainable development and re-use of existing dock infrastructure, coupled with significant improvements in efficiency through state-of-the-art container-handling technology. During the course of the year, ABP also announced plans to invest £4.4m in improvements to the bulk-handling facilities at the disused dry-dock site in the port's Western Docks. The investment, supported by a 10-year agreement with Solent Stevedores, will provide a storage facility and handling equipment to create a new terminal capable of accommodating the projected growth in dry-bulk volumes at the port.

Empress Terminal – the port's second multi-deck car terminal – was officially opened by His Royal Highness The Duke of York in May. It was built to provide for the growth in vehicles carried to deep-sea destinations by shipping lines such as Hoegh Autoliners AS, K Line, MOL, Eukor and NYK.

In recognition of the port's dedication to environmentally sound operations, Southampton was awarded a Port Environmental Review System (PERS) accreditation during the year, which provides independent verification of the port's achievements in environmental port management. An added advantage of successfully completing PERS is that the port has now met some of the criteria needed to receive ISO14001 status, an internationally recognised environmental management benchmark.

#### **Honorary Branch Secretary**

Rod Baker has announced his intention to retire from the post of Branch Secretary after many years sterling work at the next branch AGM in November 2007.

The committee invite nominations for willing individuals or volunteers for the post effective from the AGM as soon as possible so that a successor can take up the post in tandem with Rod prior to the AGM to ensure a handover and continuity of activities.

Please contact Rod in the first instance or any committee member for further details.

### **Forthcoming Meetings**

#### July 10th – Ten Members Ten Minutes The secretary requests those intending to

present a short talk during the evening to contact him giving as much notice as possible.

#### August 14<sup>th</sup> – Members Image Gallery

The Editor needs any digital pictures in advance of the meeting so that they can be compiled prior to the evening please see the website or contact the Editor for more details.

Prints and transparencies will also be included on the evening.

## The LNG Ship - Editor

At a recent branch slide show 'Aspects of Tankers' the members asked some questions – I hope some of them are answered below.....Editor

#### What is LNG

Natural gas is colourless, odourless and non toxic. LNG is natural gas which has been supercooled to – 160 deg C. Liquefying natural gas reduces its volume by more than 600 times making it more practical to move and transport at atmospheric pressure.

Natural gas is converted to its liquid state at facilities known as liquefaction plants. Algeria, Indonesia, Qatar and Trinidad are currently the leading exporters of LNG. Australia, Iran, Nigeria, Russia and other countries also have the potential to export LNG. LNG is imported by many countries such as USA and especially Japan where 97% of their natural gas comes from LNG.

LNG is not explosive in its liquefied state, but as a vapour mixed with air it is flammable in 5% to 15% concentrations. As LNG vapour warms above -106.7 deg C it becomes lighter than air and will rise and disperse rather than collect near the ground. It is not explosive unless in flammable concentrations of gas which could occur are in enclosed or confined spaces. Spill sizes as well as fire sizes, vapour clouds and resulting hazard zones are extensively analysed at shore facilities.

Specially designed ships are used to transport LNG to import terminals. The ships carry LNG over long distances storing LNG safely at -162.2 deg C. There are two basic LNG tanker designs both of which consist of an outer hull, inner hull and containment systems. In membrane tank designs the cargo is contained by an Invar (low thermal contraction coefficient metal with high nickel content) or stainless steel double walled liner that is structurally supported by the vessels inner hall. The second Moss design uses structurally independent spherical or prismatic shaped tanks. These tanks are constructed of either stainless steel or aluminium alloy.

Transporting gas in this form takes up less space making it more economical. Clearly price is a major determinant and if the consumer is more than 5000 km away carrying LNG by sea is normally more economical than pipelines. In a situation of rising world energy demand coupled with a desire for 'greener' less polluting fuel natural gas fits the bill. Japan is the largest importer of LNG consuming around two thirds of the world's production. Indonesia is the largest supplier in the Far East.

The worlds LNG carriers have been dominated by two containment systems the Moss spherical self supporting tank system from Norway and the Gaz Transport and Technigaz membrane tank system from France. Another new system now being used could be of a new pyramid type from ConocoPhillips, which has received Approval in Principle from ABS

#### **Moss System**

The Moss type is the design emblematic of the LNG ship in that the tops of the spheres protrude above the hull making the ships instantly recognisable. Pioneered by Norway's Moss Rosenberg in the 1970's the Moss system features unstiffened spherical tanks connected at the equator to a single cylindrical supporting skirt. The lower portion of the skirt is welded to the ships structure. Most installations have been specified with aluminium alloy fabrication but 9% nickel-steel has also been used. Insulation (of polyurethane Styrofoam or equivalent) is arranged over the tanks outer surface and the upper part of the skirt. Progressive refinements by the Norwegian licensors and its key licensees have improved the design reducing the gas boil off rate from 0.25% of cargo per day to 0.1%. The advance has resulted partly from reducing the number of cargo tanks to four (from five or six in earlier 125,000 cubic metre carrier generations) but mainly by introducing a heat brake in the cylindrical skirt and increasing the tank insulation thickness.

#### Membrane System

This system also uses typically four tanks compared with earlier designs using five or six to help reduce boil off to approximately 0.15% of cargo volume per day very similar to Moss designs.

The system comprises primary and secondary membranes made of nickel steel Invar that are supported by the inner hull structure through layers of insulating material. The Invar strips creating the membrane have a low thermal contraction coefficient and are highly resistant to corrosion eliminating the need for stress reliving surface corrugations in the membrane. The insulation can be formed by layers of internally stiffened birch or beech plywood boxes filled with resin impregnated perlite beads. The boxes can measure approximately 1 metre x 1 metre and have a varying depth between 0.2 and 0.25m depending on the boil off rate required. The plywood is usually 9mm thick apart from reinforced areas which bear the bear the additional stresses imposed by sloshing. The boxes are secured together as a framework which is fastened to the hull by stud bolts while the membranes are secured to the boxes by tough Invar tongues. Other methods of insulation have been developed for newer vessels.

Since the membrane tank system derives total support from the hull it is directly affected by ships loadings, strains and stresses in normal seaway conditions. The increase in tank sizes using this method of containment has increased speculation in the shipping press concerning sloshing of the cargo because of the relatively large unbroken surfaces of the membrane and lack of internal bulkheads

Since LNG tankers rely on insulation rather than refrigeration to keep their cargo refrigerated, a small percentage will "boil off." Traditionally, LNG tankers have utilized this boil off as fuel in steam turbine based propulsion plant. That's changing. One way or another, the diesel is coming on board and modern ships will have dual fuel main engines. One approach is to re-liquefy the boil off gas, so that it remains as valuable cargo. Shipboard reliquefaction technology has matured considerably in recent years, making use of experience from land-based and LPG carrier installations.

It seems the use of the membrane system though is currently the trend.

#### Summary Large LNG Ships choice of Containment

#### Membrane

Maximised hold Space reducing the overall ship dimensions and gross tonnage for a given LNG cargo capacity Assured structural continuity throughout the hull space since the deck has no openings for tanks Lower Suez Canal Tonnage

Cheaper construction

Improved visibility and maintenance of the deck and piping thanks to flat deck configuration

Moss

Sloshing stresses in partially full tanks not a problem

Seen here operating off berth 203 assisting a container vessel having arrived in the port in December the tug **Kincraig** 98/290 50t bp still in the colours of JP Knight. Originally built for J.P Knight she was employed in Scottish waters.





The Wightlink car ferry **Cenwulf** 73/761 photographed here departing Yarmouth I.O.W. for Lymington. She is due for replacement along with her two sisters in 2008. See article page 7

# New radar antenna now atop Portsdown Hill - to pave the way for the next-generation of British destroyers.

The Sampson radar system – its spiky dome bears an uncanny resemblance to the first artificial satellite – was craned into place on a mock-up of a Type 45 main mast high above Portsmouth.

The £10m Maritime Integration & Support Centre built by BAE Systems is designed to test the brains of the new destroyer before the vessel enters front-line service.

At the heart of the Type 45 is the PAAMS missile system and its Aster missiles, launched from a silo on the ship's forecastle.

The weapon is impotent without its brain; it is the task of Sampson to identify and track hundreds of aerial targets and send constantly-updated data to the missile once airborne to intercept anything which might threaten the Fleet. In theory, Sampson can track – and launch Aster to destroy – a cricket ball travelling at three times the speed of sound.

Three prototype Sampsons have been built; one is fitted to the Longbow trials barge, due to leave Portsmouth shortly for the Mediterranean to test the missiles and radar at sea; a second Sampson can be found on the Eskmeals gunnery range in Cumbria.

By testing the radar at Portsdown Hill, Whitehall hopes to save time and money, ironing out any problems and perfecting the system before it is installed in HMS Daring, the first ship in the class due to enter service in 2009.



The trials ship Triton visited the port just before Christmas. She sailed for Darwin where she is to be leased to the Australian customs fore 12 months at a cost of  $\pounds$ 7m. She will be used off the north cost of Australia in an attempt to deter and seize illegal fishing boats. 'Triton' was selected for this duty because of her proven stability in rough seas. Her owners will also supply a crew of 14 to run the ship, but in addition she will carry 28 armed customs officials and will mount two 0.5" machine guns.

# FIFTEEN years after she last sailed under her own steam Falkland's veteran HMS Intrepid will finally be broken up – or in modern 'green' parlance 'recycled retirement'.

The assault ship has been moored alongside her sister **Fearless** in Portsmouth Harbour since the duo were paid off, although **Intrepid** spent the last decade of her life laid up in the naval base in reserve. A decade earlier she played a key role in the liberation of the Falklands during the landings at San Carlos – the high point in a career which spanned four decades.

The end for the sisters came with the arrival of the **HMS Albion** and **Bulwark**, much more potent assault ships, but **Intrepid** and **Fearless** continue to possess an irresistible charm (and firm following) as the last steam ships in the surface fleet.

Leavesley International, the firm preferred by Whitehall to carry out the breaking up – most probably in the UK – hopes to sell a limited number of 'souvenir' items from **Fearless**.

It hopes to sell off other material, equipment and components from the ship for re-use, and recycle much of her steel.

Whitehall laid down strict criteria for firms bidding to dismantle the assault ship in an 'environmentally-friendly' manner

No date has been set for the dismantling operation to begin; Leavesley must first obtain the necessary licences and approvals from authorities before the MOD can place a contract with it. In recent years many RN ships have been sent overseas for breaking up, but defence minister Lord Drayson said the process of "uncontrolled, unregulated recycling of Royal Navy vessels in other parts of the world" had come to an end.

# Modern double-ended newbuilds to take place of ageing Wightlink C-class vessels......

UK FERRY operator Wightlink is to build the replacement vessels for its Lymington-Yarmouth service at a Croatian shipyard for delivery spring 2008. The Portsmouth operator is keeping tight-lipped about the name of the shipbuilder, but it is believed to be the Kraljevica Brod shipyard. The newbuilding contract is for two 62.4 m double-ended vessels, with an option of a third vessel.

The newbuildings will replace Wightlink's three ageing C-class vessels on the popular crossing from Lymington to Yarmouth. The C-class vessels, **CAEDMON**, **CENRED** and **CENWULF**, were all built in 1973 by the now closed Scottish shipbuilder Robb Caledon in Dundee. They are in urgent need of replacement and maintenance costs have increased. The design of the Croatian newbuildings is the result of a working party involving staff from the route that the new vessels will operate on, various Wightlink managers and consulting naval architects Hart Fenton.

The new ships will have the flexibility to carry a greater and more varied traffic load within a footprint that is only marginally larger than the present vessels on the run and with the same draught. Ferries using the port of Lymington are very much constrained by size and draught, as the Lymington River is long, shallow and meandering, with a great deal of yachting activity year round, but especially in the summer months. Therefore, maneuverability is very important in the ferries design and once again a Voith Schneider propulsion system has been chosen.

The Croatian ferries will have a length overall of 62.4 m breadth of 16 m and a draught of 2.3 m. They will each have a passenger capacity of 360 and space for 65 cars. In fact, the passenger capacity of the newbuildings is significantly less than the C-class vessels they replace, although the car capacity is higher. The C-class vessel can carry 512 passengers and 58 cars.

The reason for the reduced passenger capacity is due to a fundamental change in the passenger profile on the Lymington-Yarmouth route. In the early 1970's much of its business came from foot passengers arriving by train. However, with more and more people in the UK now driving, the new vessels reflect this change in profile.

Like the C-class, the new ferries will be propelled by Voith Schneider units, featuring two 825 kW water tractor units, powered by four diesel engines. The make of the prime movers has yet to be decided. Maximum speed will be 12 knots. Consultant naval architects for the new Wightlink vessels is well known Portsmouth company Hart Fenton, which has just been sold by Sea Containers to the UK's independent marine, offshore and defence design and engineering consultancy Houlder.

### Chemical free system anticipates IMO rules.....

The scale of the challenge posed to a marine environment by invasive species carried in ballast water is witnessed by the fact that every nine weeks a new marine creature establishes itself in alien coastal waters. Species hitch-hiking within the 7bn tonnes of ballast water moved by ships from one ecosystem to another every year have devastated marine life, spread viruses, collapsed local businesses and economies and necessitated billions of dollars in control measures.

IMO legislation to combat the problem is set to take effect on the first newbuild tonnage from 2009, should 35 countries representing 35% of world tonnage ratify. But this envisages ballast water exchange far out to sea as an acceptable interim practice. Established safety concerns are growing that the process can lead to vessels instability as during ballast water adjustment in the case of **COUGAR ACE** last year.

Alfa Laval have launched PureBallast, described as the first commercially available viable system for preventing the transport of potentially invasive species in ballast water. The chemical-free system has been developed in co-operation with Wallenius and arrives more than two years in advance of IMO regulations. Until now no treatment system has been commercially viable or able to meet the proposed requirements with chemicals, says Alfa Laval.

Chemical fed systems that meet IMO technical conditions require chemicals in high doses. These entail safety, storage, logistics and corrosion issues. And high concentrations of chemicals such as ozone or chlorine may not be the desired consequence of the Ballast Water Convention. Chemical systems also require a period of time, often five days before they become effective, which could be problematic for owners waiting to deballast.

Each advanced oxidation unit is capable of dealing with 250 cu m of ballast water an hour. Eventually modular construction will make systems in capacity ranges between 250 cu m and 5,000 cu m an hour available. In the initial stage the maximum available capacity for the modular units would be 2,500 cu m an hour, or 10 advanced oxidation technology units.

. Its ability to perform at sea has been confirmed in three years of full-scale onboard tests on the Wallenius car carrier **DON QUIJOTE**, where a 500 cu m an hour unit was installed.

## Monty's Notebook - by Monty Beckett

A round-up of new or infrequent callers to Southampton Docks over the last few months. Details and photographs form Monty Beckett.

Berths 203-7: Cape Franklin 15995/06, CMA CGM Giovanni 91649/06, Genoa Bridge 66292/02, Santiago Express 32444/84, CMA CGM La Traviata 91410/06, Altamira Express 40431/87, APL Hong Kong 66573/02, Svendborg Maersk 91560/98, Maersk Diadema 52701/06, Rickmer Rickmers 16800/95, John Mitchell 3999/97, Marianne Schulte 26718/01, OOCL Atlanta 89097/05, Santa Christina 37113/01, NYK Vega 88600/06, Maersk Nottingham 26833/04, Paranagua Express 25406/06, Stina 9962/04, Dette G 3999/95

**RoRo Vessels**: Maersk Wizard 57000/06, Triton Highway 45783/87, Pacific Spirit 53578/87, Melbourne Highway 43259/83, Hoegh Oceanic 58947/03, Tortugas 61321/06

**Berths 107-9**: Pioner Koly 4814/81, World Trader 35345/81, Alanya 27012/86, Diezeborg 6219/00, Sea Shannon 1670/96, Celtic Carrier 2565/85, Antari 2446/98, Kwintebank 6363/02, Nekton 1996/96.

Berth 104: Green Maveric 5103/93, Green Magic 5103/90, Green Neptunic 3998/89

**Berths 102-3**: Aladin 1 1499/82, Helen 81/1425, Ewald 1599/99, Elbia 1525/85

Berth 102: Scheldegracht 16639/00, Wealthy Star 12453/91, Statengracht 16639/04

**Berth 36**: Hemo 2240/75, Amur 2528 3086/88, Heroi Stakhorskyi 5166/06, Sea Hawk 1989/89, Frisium 1786/92, Krissa 12765/79, Arklow Resolve 2999/04, Pindushi 2478/77, Pipit, RMS Ruhrort 1281/83, Xandrina 1567/86

**Berth 25**: BBC Ems 12936/06, Sea Box 1525/86, Korsoer 5801/89. Beluga Endeavour 9611/04, Nikos 1499/81.

Dibles Wharf: Lark 1972/76, Pilsum 1662/93

**Princes Wharf**: Daniel K 3037/02, Elbetor 2351/90, HC Freya 2545/01, Potosi 2506/95

Marchwood Bulk: Swanland 1978/77

Husbands Jetty: Locator 181/70

Marchwood RLC: CEC Svenborg 2462/93, Fort Austin, Fast Arrow 15347/79

**Tugs**: Ajaks 335/74, Smit Bronco, Smit Bison, Kincraig

Other Vessels: Fugro Explorer 2925/99



The coaster **Elbetor** 90/2351 inward bound in the River Itchen. Her owner/managers shown as Reederei Erwin Strahlmann.





## Eight countries plunged into darkness!

A scheduled cruiseship passage in northern Germany started a chain of events that led to Europe's largest energy blackout, affecting an estimated 10m people.

Papenburg's Meyer Werft had asked Germany's largest utility Eon to switch off a high voltage transmission line traversing the Ems river, which connects the yard with the North Sea, to allow the passage of the 93,500 gt cruiseship **NORWEGIAN PEARL**, from Papenburg to Eemshaven. The 70 km passage to Eemshaven on the North Sea normally takes about 20 hours

The blackout plunged about 10m people in Germany, Belgium, France, the Netherlands, the Iberian peninsular, Italy and Austria into darkness for nearly two hours. Parts of Morocco were also affected. Eon assumed responsibility for the incident. The cut-off led to a grid overload, said Klaus-Dieter Maubach, board member of the utility's unit Eon Energie.

However, this incident could not have been the only reason for the large-scale blackout, a spokesman for Eon's network division Eon Netz added, as the blackout occurred half an hour later. After it became aware of the blackout, Eon turned on the power again and did not cut off the line for a second time to allow the passage of the waiting NORWEGIAN PEARL. The vessel, towed by two tugs, had to return to Papenburg.

The cut-off was a normal procedure in order to avoid fires from flying sparks, a spokesman for the yard said. The space between the NORWEGIAN PEARL and the line was less than 2 metres. Ships built at Meyer Werft have to pass under the lines twice in order to reach the North Sea. For this, the power is usually cut off for about two hours

"Over the years, nothing has happened during these cut-offs," the spokesman said.

## Some Southampton callers look for efficiencies'.....

A number of the world's leading cruiseship and ferry operators are taking advantage of specialised energy audits and courses on shipboard fuel-saving methods provided by Finnish specialist Deltamarin. Typical fuel savings being gained by ship operators range between 5% and 12%, while the low investment cost usually means a payback period of between two and six months.

Annual fuel consumption figures for a typical cruiseship are around 50,000 tonnes, 10% of which is accounted for by the ship's boilers. For a typical cruiseship operating in the Caribbean the daily energy consumption is 26% at sea during the day, 41% ate sea during the night and 33% in port, with heating, ventilation and air conditioning systems being a key energy user on board. HVAC accounts for 34% of energy consumption during a typical cruise, with propulsion accounting for 33%. Well maintained and regularly overhauled rotary heat exchangers on HVAC fan units allows for substantial fuel savings.

Royal Caribbean Cruise Line and Celebrity Cruises were the first operators to take up these training facilities at the end of 2004. By the end of this year 120 people will have been trained by the Finnish specialist. Cruise operators taking advantage of Deltamarin's specialist services in the area of fuel savings include Royal Caribbean International (RCCL and Celebrity), Carnival and Disney Cruises; while ferry operators include France's Brittany Ferries calling at Portsmouth.

### Statistics from SCT

During 2006, SCT handled a total throughput of just over 1,500,000 TEU, this figure represents a 9% increase compared to the total throughput handled during 2005 (1,375,000).

A total of 693 deep-sea vessels called at SCT during the year, which is an increase of 21% compared to 571 deep-sea vessels that called in 2005. A total of 211 feeder vessels were handled during the year, with 49 feeder vessels being serviced on berth 203 by the dedicated mobile harbour crane.

Landside operations handled a total of 429,097 lorries throughout the year, which is an increase of almost 13% compared to the 381,132 lorries that were serviced in 2005. The number of boxes handled via rail during 2006 accounted for 26% of total throughput.



#### 2007 WSS SOUTHAMPTON BRANCH CRUISE

This cruise has again been booked on the '**Ashleigh R**' for Sat 2nd June 2007 departing Ocean Village Southampton at 11.00 returning 18.00. This date should coincide with the **Navigator of the Seas** being in port. As this is a branch event local members are encouraged to book their place with the Hon Treasurer by paying £14 prior to the 1st April.

After this date places will be made available to other WSS members and their guests and the cruise advertised outside the branch. The numbers on this trip are limited so to guarantee your place please book as soon as possible to avoid disappointment.

Royal Caribbean International's latest \$900 million mega ship **Independence of the Seas** is to sail in Europe from Southampton next summer.

The 3,600-passenger vessel is scheduled to make five calls in Madeira en route from Southampton to Tenerife on May 10 and 20 and October 7, 18 and 28, 2008. Details of the calls appear on the Port of Madeira website.

The ship also has nine calls at the port of Gibraltar between June and September 2008.

**Independence of the Seas** is thought to be part of a mass deployment of six ships in Europe by Royal Caribbean in 2008 with Navigator and Voyager, Brilliance, Legend and Splendour of the Seas all scheduled to make calls in Madeira.

**Independence of the Seas** is the third in the company's trio of 160,000 gross tonne Freedom-class ships. The largest cruise ships in the world, they carry 500 passengers more than Voyager-class vessels.

The **Independence of the Seas**, currently under construction at the Aker ship yard in Finland in preparation to enter service in May 2008.

Royal Caribbean is bringing 3,114-passenger Voyager-class ship **Navigator of the Seas** to operate ex-UK cruises from Southampton this summer and will showcase Independence sister ship **Liberty of the Seas** to the UK travel industry at the port in April.

Royal Caribbean signed a £10 million, seven-year deal with the Port of Southampton last September to enlarge the port's City Cruise Terminal.

Port owner Associated British Ports said at the time the agreement to expand the terminal was "so it can accommodate the new generation of large cruise ships," including **Navigator of the Seas**.



Acknowledgements for extracts from - ABP, Lloyds Fairplay, Daily Echo, Tradewinds, Navy News, SCT