

Celebrity Solstice With Cutting-Edge Technology From Norway



Engine Control Room of the "Celebrity Solstice"

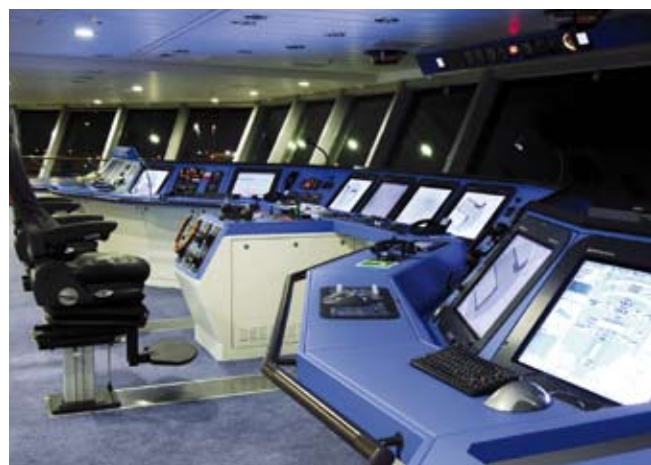
L-3 Valmarine, Drammen, Norwegian company in the SAM Group, has supplied a "state-of-the-art" Damatic DNA automation system for the new Celebrity Cruises luxury liner. The *Celebrity Solstice* is the largest cruise ship built so far in Germany, with its 122,000 RT and 317 metres' length.

Valmarine is one of the market leading suppliers worldwide of systems for ships with a high requirement profile for automation. For the *Celebrity Solstice*, Valmarine supplied the complete automation for the engines and air-conditioning, as well as the extensive Emergency Shutdown System.

The integrated automation system (IAS) monitors and controls 16,000 control and monitoring signals, of which 9,500 are hardwired and 6,500 are linked via serial interfaces. The complete monitoring system is controlled using five multifunctional workstation systems (MFW) in the Engine Control Room (ECR), three on the bridge and one in the safety centre. The system's communication network, linking the workstations, PCs, printers, etc. together, is arranged as

100 Mbps/1Gbps fibre optic Ethernet ring network. The Emergency Shutdown System (ESD) is an independent system based on the Damatic DNA platform. It is redundantly interfaced to the IAS communication network.

SAM supplied the integrated NACOS 65-5 navigation command system, with radar-controlled Trackpilot and ECDIS. The five radar scanners are linked via



a switching matrix with several multifunctional Multipilot 1100's, which enable ARPA radar functions, ECDIS, Conning and the automated control of course steering, depending on requirements.

Dear reader,

In view of sluggish orders prevailing in commercial shipbuilding since the end of 2008, it is anticipated that 2009 will also



become a difficult year for the supplier industry. The level of orders still secures employment for a foreseeable period, however only few ships are currently being ordered for 2010 and later. Experts therefore anticipate that demand will decline significantly for the next two to three years. This poses the main challenge for us, namely, remaining profitable and competitive in a market that is shrinking remarkably. This means offering our customers attractive innovations in our products and services, while simultaneously adapting costs and prices to the reduced demand. SAM is facing this task with investments in development, particularly in the field of automation and navigation, focussing on energy-saving and environmentally friendly product solutions and improvement of international business processes, in new building and in service. Yours sincerely,
Klaus Lorenz
President

Scenic Ruby With Primary Power Bus System

At the Bremerhaven-based Schichau Seebeck Shipyard, on a sub-contract for SET Schiffbau- und Entwicklungsgesellschaft Tangermünde, a luxury river cruise ship is currently being built, which packs a punch. SAM is responsible for the entire electrical fittings for the automation system, energy distribution and cable systems. In addition to the extraordinarily comfortable design of its cabins, the ship, in the so-called Scenic Space Ship class, also distinguishes itself with an innovative energy supply concept. For the first time, a Primary Power Bus system (PPB) has been installed on such a ship, which has significant advantages, among others, with installation and space requirement and improves safety on board. The longest inland navigation switchboard virtually extends along the entire length of



Foto Scenic Tours Europe: MS Scenic Sapphire, identical in construction

the ship. The decentralised energy concept results in significant cable savings. This concept was developed in cooperation with the Scenic Tours shipping company, the shipyard and SAM and subsequently implemented on board. Independent from this new build, within the context of the SAFEDOR research project, it could be pro-

ven that a RoPax ship with a SAM PPB can be approved by classification society and flag state. Therefore, nothing else basically precludes realisation for marine ships. The delivery of the Scenic Ruby will take place in April 2009. This Mini Cruise Liner is mainly used for 14-day cruises on the Rhine / Main / Danube, from Amsterdam to Budapest.

Mobile Magnetic Ranging System For UAE Successfully Tested

SAM, Abu Dhabi Ship Building (ADSB) and UAE Navy have successfully tested a Mobile Ranging System for measuring naval ships in the UAE.

The compact system, comprises of two containers and various sensors, successfully completed the testing programme in February at SAM in Hamburg. The Factory Acceptance Test is part of the extensive

order package, which was agreed between SAM and the customer. The complete testing programme included numerous different tasks, which had the overall purpose of proving the functionality of the system. The last test milestone will be the measurement of a naval ship in the Arabian Gulf region. The mobile, multi-size measurement system on land comprises of two 20-foot

measurement containers. With this, the complete system is well-suited for sea, air and truck transport. The underwater components mainly comprise of five sensors for recording magnetic, acoustic and hydrostatic signals. These signals reach the sensors via the underwater sensor cable, during a ship's overrun. From there, they are transferred to the computer in the measurement container on land via an underwater fibre optic cable and analyzed and displayed there. The allocation of the recorded signals to a ship's location and position during the overrun takes place via a high-precision DGPS system. For this purpose, a DGPS receiver (reference station) is accommodated with two telemetry units in the interface cabinet of the measurement container. A DGPS receiver for determining the ship position and an additional DGPS receiver for determining the ship location are temporarily installed on board to be measured during a ship ranging, together with two telemetry units. During the overrun, the ship's course can be followed on the tracking computer in the measurement container, as well as on the laptop, which is also temporarily installed on board.



Photo: Our UAE guests from left to right. 1st. Sergeant Awad Abdulrhman (VAEN), CPO Nasser Al Musherkh (VAEN), Major Omar Al-Hassni (VAEN), CPO Abdelrahman Almazam (UAEN), Piyush Sharma (ADSB, Senior Section Engineer), Capt. Ali Dallak (VAEN)

Maritime Research Project Completed

On 10 February, the final meeting of the SAFEDOR partners took place in Hamburg at Germanischer Lloyd (GL). "Risk-based Design" was the driving objective of the EU Commission for this multinational research programme, in which 50 organisations participated.

SAFEDOR integrates the analysis of safety risks into the traditional design process. With this, safety targets can be realised cost-effectively. SAM's Primary Powerbus System is a typical example of this. The classic approval regulations require cable. In a concept study within the context of SAFEDOR, under the management of Dr. Hensel, in cooperation with GL, the Danish Marine Authority, the University of Glasgow and STX Europe, it was proven that the powerbus, with SAM bus bars, offers comparable safety to cable. Therefore, an approval for marine ships is within reach. Limitations to specialist applications, e.g. for the river cruise ship, *Scenic Ruby*, are then no longer necessary. One of the main pillars of the SAFEDOR research concept was also to make the application results tangible. That is why SAM is also formulating the new navigation concept with the partners, Carnival, D'Appolonia, Martek and Frestri, as an additional sub-project within the

context of SAFEDOR. The result, a bridge in the SAM design, was exhibited in the foyer of Germanischer Lloyd. GL employees and project partners took advantage of the opportunity to use our bridge for manoeuvring a 218 m container ship on the river Elbe as simulated by the RDE simulator. As a founding member of SAFEDOR, in addition to GL, the Meyer shipyard, the Danish Marine Authority, the DNV, Carnival and University of



Photo: SAM bridge in the foyer of Germanischer Lloyd

Glasgow, SAM is also in the Steering Committee and has been represented by Dr. Wilfried Hensel for many years and now, by Karl-Christian Ehrke.



Maik Stövhase
Senior Vice President

Five years ago, Maik Stövhase assumed the responsibility for SAM's Energy & Drives product division at the headquarters in Hamburg, which handles extensive orders for merchant and marine shipbuilding, energy distribution, drive technology and provides worldwide customer service. For 20 years, Maik Stövhase has been active in the maritime industry. His career began in product development, followed by foreign postings and tasks in service, as well as start-ups of automation and drive systems. The practical experience that he gained in this was a main qualification for entering into project management. Prior to joining SAM, he set up a Marine division in Singapore.

Extensive Service Package For Marina



Illustration Oceania Cruises: Side view Marina

Funa, a supplier of professional ultrasonic, light control and safety technology in Emden, mandated SAM and its Italian subsidiary, APSS, with supplying an extensive installation package for the local entertainment system on a new build of Oceania Cruises, Fort Lauderdale.

The ship will also receive an integrated Damatic DNA automation system by L-3 Valmarine. The 239-metre-long cruise ship, Marina, will be delivered at the Genoese Sestre Ponente shipyard of Fincantieri in 2011.

The many years of good cooperation between SAM and Funa has now been reconfirmed in a success achieved for the first time in Italy. Through this order in Italy and the extensive turnkey competence of SAM, APSS will commit itself to additional turnkey activities, as well as in a new cooperation with Funa, as a partner.

New Training Centre For Navigating Officers And Marine Engineers



Photo: 360 degree panorama simulator with SAM bridge

The new Marine Training Center (MTC) in Hamburg Stellingen is regarded as one of the largest and most state-of-the-art training centres for civil navigation in Europe. In addition to Hamburg and the Elbe estuary, Singapore, Shanghai, Rotterdam, Yokohama, Los Angeles and parts of the North Sea and ice-covered routes near Helsinki can be simulated.

The MTC is therefore in the tradition of the internationally renowned Susan ship simulator. With the festive opening of the state-of-the-art training centre on 27 February, in future, up to 70 participants per day can be trained in various disciplines in Hamburg. In addition to training courses on the ship navigation simulators and radar simulators, the extensive range of courses also offers seminars on the engine simulator (two-stroke diesel MAN 7K98 MC main machine with a 1:1 engine control room on a 5,000 TEU container ship), on a simulator for voice radio training for navigating officers (GMDSS), as well as a simulator for training tanker, gas tanker and LNG specialists. Furthermore, practical courses are offered for handling diesel engines in the extensive

MAN-Diesel training workshop. On seven SAM bridges, the largest of which enables a 360 degree panorama, the simulation software was supplied by Rheinmetall Defence, ship officers can train in manoeuvring, even under the most difficult conditions. Partners of the MTC are the Rickmers shipping company, Orion Bulkers, Marlov Navigation, MAN Diesel, Germanischer Lloyd, Lotsenbrüderschaften Elbe, Hamburger Harbour, ma-co, several private investors, as well as SAM, as a cooperation partner. The MTC is managed by Heinz Kuhlmann, former Product Division Manager at SAM.

Trade Fairs 2009

Seatrade Cruise Shipping	Miami	16. – 19. March
Europort Istanbul	Istanbul	25. – 28. March
East Med Marine Exhibition	Limassol	02. – 03. April
NorShipping	Oslo	09. – 12. June
NEVA	St. Petersburg	22. – 25. September
Monaco Yacht Show	Monaco	24. – 27. September
Inmex India	Mumbai	24. – 26. September
KORMARINE	Busan	21. – 24. October
International Boat Show	Fort Lauderdale	30. – 03. Oct / Nov
Europort	Rotterdam	03. – 06. November
Marintec China	Shanghai	01. – 04. December

News

The Chinese shipyard, Tongfan Jiangxin, mandated SAM with supplying MOS 2200 Alarm and Monitoring Systems, PCS 2200 Propulsion Control Systems, navigation packages, GMDSS and satellite communication, as well as internal communication packages, including consoles for a six-series of 17.000 dwt Multi Purpose Vessels. The ships are being built for the Danish Clipper shipping company.

The Chinese shipyard, Huanghai Shipbuilding, placed an order with SAM for the delivery of integrated NACOS 54-5 systems, compass systems, GMDSS and satellite communication, as

well as consoles for a ten-series of 31,000 dwt Multi Purpose Heavy Lift Vessels. The ships are being built for Columbia Shipmanagement. The F. Laeisz shipping company mandated SAM with the replacement of the previous Geamar 100 ISL automation systems with state-of-the-art MCS 2200 Monitoring and Control Systems for four 46,000 dwt full container ships for their fleet. The retrofit will be carried out in 2009/2010.

SAM received additional retrofit orders for six cruise ships of Celebrity Cruises, Princess Cruises, HAL and NCL. The modernisation of the

integrated navigations systems will take place in 2009 in the USA/Caribbean.

For a megayacht, SAM received an order to delivery a medium voltage drive system in PWM technology.

From Singapore, SAM received the order from the ASL shipyard for the energy generation, drive system, dredger drives and automation for a cutter head dredger for Dredging International, Belgium.

SAM received a considerable turnkey order from the Lloyd Shipyard in Bremerhaven for the retrofitting of the new TUI cruise ship, "Mein Schiff".

MASTHEAD

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SAM Electronics GmbH
Marketing
Behringstraße 120
22763 Hamburg
Tel.: +49 (0)40 – 88 25-2110
Fax: +49 (0)40 – 88 25-4022
info@sam-electronics.de
www.sam-electronics.de

Editing:

Maik Stövhase, Ulrich Röhl

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www.dockside-hamburg.de