



# Technical Simulation Consultants Ltd Newsletter

## TSC'S "NEXT GENERATION" UPGRADE FOR THE BASIC GENERICS RANGE

TSC are proud to announce the "Next Generation" upgrade for the basic generic range of simulation models. Widely used around the world for process, plant and control systems introduction, the TSC generic range of over 40 models has been given a complete facelift with many enhancements, including:

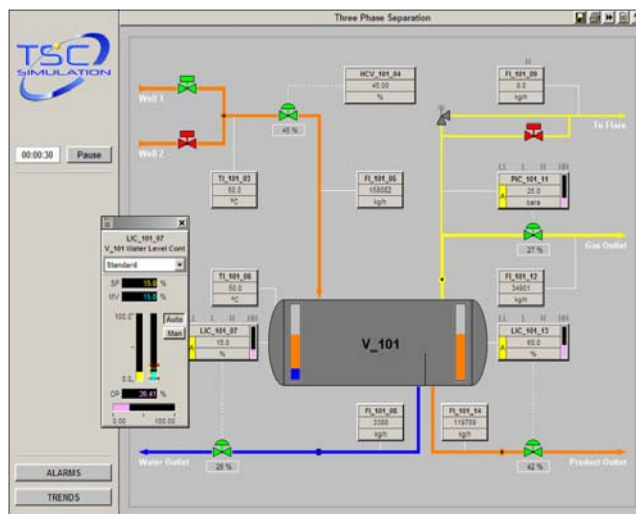
- Modern DCS style interface, with multiple graphic screens for the larger models
- User Guide and Workbooks built into the Models
- DCS style controllers and faceplates based on the best elements of industry standard DCS systems
- Trend, Alarm and ESD Cause & Effect systems all included
- Speed-up and slow-down runtime function included
- Remote starting and monitoring over TCP/IP LAN for Classroom use.

The upgraded models run at the XGA resolution of 1024x768 – the basic screen size of many PCs including laptops and very suitable for classroom use.

The intuitive DCS based interface has been optimised from the best features of industry standard types, allowing Trainees to easily move on to the DCS used in their workplace.

"TSC has produced a set of models that are specifically designed for training and assessment in the classroom environment of colleges and training centres. They have been optimised based on customer feedback and TSC's 30 years of experience in this field".

Instructor start-up and monitoring over a TCP/IP network is standard. The system includes full event logging of every trainee action for competence recording, and remote fault injection on more complex models



Three Phase Separation model Sim 282

Each model is supplied with a User Guide and Workbook screen displayed via menu buttons (top right on the screen example above). The Workbook may be easily replaced by local Training Centre material if preferred for a particular course.

The model range fully replaces the present Basic Generic Simulation Model range, with both enhanced dynamic performance and usability.

*(continued on page 2)*

### INSIDE THIS ISSUE:

TSC generic upgrades	1
BP Caspian	2
TSC generic upgrades (continued)	2
Visit News	3
People News	4

## BP CASPIAN SEA



TSC has supplied BP Caspian Sea with all its training simulators over the past six years. These include the basic level generic models used in the Caspian Technical Training Centre, as well as site specific emulated simulators for the Sangachal terminal, the Central Azeri

platform and the Shah Deniz Gas Facility. The latest Simulator to be developed for BP Caspian Sea is for the training of operators for the Azeri-Chirag-Gunashli (ACG) Control Room at the Sangachal Terminal.

The Simulator uses a full TSC emulation of the actual ABB DCS system, and covers all the oil, gas and produced water system areas of the process.

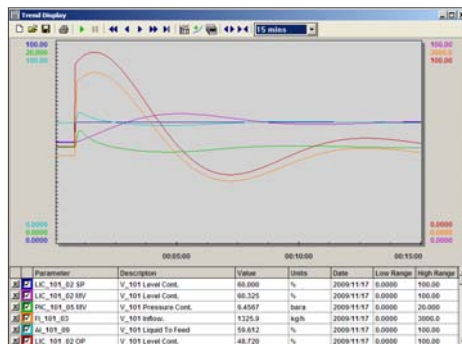
Trainees are able to start up and shut down the processes using the site procedures. The Trainer is able to inject unusual feed and process conditions, faults and emergency situations into each scenario.

## “THE NEXT GENERATION” UPGRADE FOR OUR BASIC GENERICS RANGE

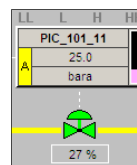
(Continued from page 1)

As a part of the DCS style of the upgrade, the Controller faceplates, Trend package and ESD system have all been enhanced to improve the training performance.

*‘Channels may be added or switched out, and the current selection saved for recall.’*

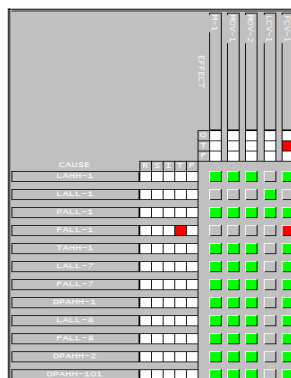
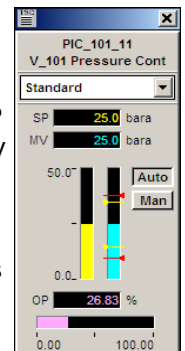


The Trend package is now a six-channel full function display. It has channel coordinated colours, trend group recall, range and background selection, print options and cursor display value indication. Channels may be added or switched out, and the current selection saved for recall.



Control elements show the key values for each controller. Clicking on the element produces a DCS style controller faceplate

The Controller faceplate includes all control loop information. In standard mode, the SP, MV and OP values are shown and may be changed as required. Auto, Manual, Cascade or Ratio control may be selected. Alternative views include alarm and tuning settings.



The more complex models can include an ESD system with Cause & Effect charts that include Overrides and Resets. This allows training in start-up and fault condition scenarios.

All this, together with the ability to run the models at real time or up to x10 speed, to monitor the models remotely from a classroom instructor station, and to record and print event logs for assessment validation, provide the models with the most powerful training capability available.

For further details, please contact Lyndsey Done: [l.done@tscsimulation.co.uk](mailto:l.done@tscsimulation.co.uk)

## LATEST VISITS NEWS -

### QATAR



TSC MD Michael Bolton, and Technical Director, Michael Fenton recently visited ExxonMobil Upstream Research in Doha, Qatar.

The purpose of the trip was part of a research project which combines TSC simulations and 3D image visualisation for operator training. Further details of this technological leap will be divulged as the project progresses.

Qatar is one of the world's fastest growing economies. The country is based around almost a fifth of the world's known gas reserves, and it has recently ordered over 40 super-LNG-tankers to deliver the liquefied gas all around the world. Terminals at Milford Haven and Gasport in Teesside are geared to receive these deliveries for the UK. In Doha, the skyline changes at every visit – over 20 high-rise blocks are presently under construction just in Doha downtown. They all have their own architectural features. The picture shows two buildings about a mile from the hotel – they really are built that shape!

### MALAYSIA



*Petronas twin towers Kuala Lumpur*

TSC Engineers Will Place and Sam Jago recently travelled to the Malaysian capital Kuala Lumpur for a kick-off meeting with INSTEP (Institute of Technology Petronas).

The meeting was arranged through the Malaysian company Ingress.

INSTEP are a major training unit with the purpose of providing training to people seeking to work in the oil and gas industry. INSTEP have ordered a TSC generic offshore platform model tailored to allow a vigorous training program to be designed around it.

The trip was a great success and we look forward to working with both companies over the next few months and into the future.

The two engineers will be joined by Michael Fenton, TSC's Technical Director, on follow-up trips to Malaysia in December and again in January. The latter trip will involve a Site Acceptance Test at the INSTEP main facility in Kuala Terengganu.

*INSTEP have ordered a TSC generic offshore platform model tailored to allow a vigorous training program to be designed around it'*

### OMAN

Senior Engineer Sam Jago recently had a visit to Oman LNG Company near Sur in Oman. Sur is located roughly two and a half hours drive through mountainous roads from Muscat the capital city of Oman.

Whilst there he gave a presentation showcasing TSC's latest generic models as Oman LNG are looking to enhance their operator training facilities with a twelve PC generic simulator suite covering all areas of their process.

Sam's return from Oman was full of adventure as his outgoing flight was delayed. This gave him a dash through Abu Dhabi airport with numerous airport staff. He managed to catch another re-routed flight taking off 20 minutes after his arrival in the airport.

Sam eventually arrived safely in the UK, having returned from Oman via Abu Dhabi (where he had to abandon his luggage) and Doha (Qatar).



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Tom Pretty

TSC welcomed Simulation Engineer **Tom Pretty** to the team in August. Tom graduated from Loughborough University during the summer with a 2:1 in chemical engineering. During this time he spent his placement year working in Liverpool for Eli Lilly. Tom, who enjoys climbing, said: "Working so close to the Peak District means I'm looking forward to making the most of the climbing available." A warm welcome from all of your colleagues.



Baby Poppy

Congratulations to TSC Senior Simulation Engineer **Phil Westmorland** and his wife Fru on the safe arrival of their first baby, a girl called Poppy on October 9th weighing 7lb 4oz.

Phil, who has now returned to work following his paternity leave, says they are tired but thrilled with the new addition to the family. TSC wishes Phil and family all the happiness and lots of fun times ahead. Congratulations!

## ICE DANCING QUEEN



TSC Engineer **Jessica Guzzetta-King** has successfully completed her Level 7 Ice Skating exam. In last November's newsletter, we reported how she had started ice skating lessons at the Nottingham Arena after moving to Nottingham to join the team at TSC.

This level requires skating on inside and outside edges as well as 3 point turns - basically moving in a circle and twisting on one foot. Trickier than it sounds by all accounts. Well done and keep up the hard work!

## NOTTINGHAM'S GOOSE FAIR



Goose Fair Circ 1927

Nottingham is home to one of the world's longest-running fairs. Goose Fair dates back to the charter of King Edward I - around 1284.

The popular four-day, family event is held every year during the first week of October. Today it mainly consists of rides and games but it started out as a trade fair. Its name originally came from the large numbers of geese that were driven from Lincolnshire to Nottingham for sale.

## GOOD LUCK TO STUDENT LUKE

TSC said goodbye and good luck to Loughborough University student **Luke Johnston** at the end of September. Luke was with TSC for a 45-week placement as part of his DIS (Diploma of Industrial Studies) qualification in Chemical Engineering.

He assisted with the recent upgrade for the Basic Generic Simulation Models which is reported on the front page of the newsletter. TSC wishes him all the very best on his return to university to complete his Masters Degree

## ITS NEARLY CHRISTMAS TIME

All TSC staff and partners will be enjoying their Christmas celebrations on December 1st at the locally renowned Living Room bar and restaurant.

It's been booked a little earlier this year as it was proving quite tricky to get everyone together due to some demanding work schedules over the month of December!

Rest assured everyone will be able to enjoy time off over the festive season!