sim INFOSYSTEMS

SIMULATION DRIVEN SOLUTIONS

SERVING MECHANICAL / ENERGY ENGINEERING

- HEAT TRANSFER LAB
- ENERGY GENERATION
- UTILITIES SYSTEMS
- IC ENGINE LAB
- INDUSTRIAL POWER PLANT
- WATER TREATMENT PLANT

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ABOUT SIM INFOSYSTEMS

"SIM INFOSYSTEMS is a global leader with over 20 years of experience specializing in the development of software solutions tailored for simulating process plant operations, control and safety systems across diverse industries".

We have completed more than 150 simulation projects for the Industrial and academic sectors.

Our customer base spanning across 85 Industries, 100 institutions and over 30 countries is a testament to our global footprint and commitment to serving diverse markets.

ProSimulator™ is a high-end virtual twin software package for training the plant operating personnel and engineering students.

ProSimulator™ provides opportunities to manipulate systems to simulate all possible emergencies and abnormalities, including plant startup and emergency shutdown that an operator has to face, when placed in the actual process plant control room. This ability of personnel to respond to micro second variations in the parameters of a process plant, ensure optimal production and absolute safety.

Sim Infosystems Offers:

- Custom designed simulator for process and power industries
- Standard simulation software for industrial training center and academic institute
- Skill development training services for industrial training center and academic institute

ProSimulator™ is a complete Virtual Twin package and consists of:

- Simulator hardware
- Instructor Station
- Emulation or Direct Connect Operator Station for various DCS
  - ProSimulator™ Standard or Custom Process Models for:
    - ✓ Process control & Instrumentation
    - ✓ Basic process Operations
    - ✓ Refining
    - ✓ Gas Processing
    - ✓ Upstream Operations
    - ✓ Fertilizer
    - ✓ Chemicals
    - ✓ Petrochemicals
    - ✓ Power & Utilities
    - ✓ Utilities System
    - ✓ Metal processing
    - ✓ Bio and Food processing
- Pro-VFO, a 3D \ VR Field Operation Suite.
- Simulator for AI projects
- Interface Software
- User Documentation, Software License, training and support

ProSimulator™ Instructor station enables the instructor to control and direct the training sessions. From the Instructor station, multiple independent training sessions can be invoked by the Instructor and each training session can be assigned to work with one or more operator stations. Using this software, the Instructor can load a model, set an initial condition, invoke malfunctions, take/recall snapshot, change simulation speed and monitor & evaluate the performance of the trainees.

ProSimulator™ offers full function Direct connect simulator or provide emulation software for various DCS

- Yokogawa Centum CS3000
- Yokogawa Centum VP
- Honeywell TDC3000
- Experion
- Fox I/A
- Siemens PCS7
- DeltaV
- ABB Harmony
- ABB800xA
- Triconex PLC

Benefits of ProSimulator™

For Academic

- Hands-on Learning experience
- In-depth Process Understanding
- Carry out In-house projects
- Sound Fundamental Concepts of Process Control and safety with DCS Operations
- Industry readiness - Understanding the Intricacy & Complexity of process dynamics
- Completive edge for Internship and jobs
- Faculty Development
- Boosted accreditations ranking

For Industries

- Increase operator skills
- Improved Plant Safety and compliance to environmental regulations
- Increased familiarity of Controls & Interlock Systems
- Smooth Startup & Shutdown
- Faster Recovery from External/Internal Process Disturbances
- Higher workforce availability and reduce training time
- Evaluation of Operator Proficiency
- Minimize Operator turnover impact

OUR PARTNERS:

Omega Simulation Co.,Ltd. YOKOGAWA Co-innovating tomorrow™ Honeywell Ferroman ABB AVEVA

ProSimulator™ Standard Process Models

PS-1000 - Control & Instrumentation

PS1001 On-Off Level Control
PS1002 On-Off Temperature Control
PS1003 PI & P Controller
PS1004 Pressure Controller
PS1005 Level Controller
PS1006 Direct and Cascade Control
PS1007 Split Range Pressure Control
PS1008 Ratio Control
PS1009 Feedback and Feedforward Control
PS1010 Three Element Boiler Control
PS1011 Control Valve Characteristics
PS1012 Characteristics Coefficient of Control Valve
PS1013 Rangeability of Control Valve
PS1014 Interacting and Non-Interacting Level Systems
PS1015 Basic Instrumentation Troubleshooting System

PS-2100 Basic Process Operations

PS-2002 Superheated Steam Boiler
PS-2003 Centrifugal Pump
PS-2005 Heat Exchanger
PS-2006 Natural / Forced draft furnace
PS-2013 Centrifugal Compressor
PS-2014 Compressor with Utilities
PS-2015 Reciprocating compressor
PS-2023 Refrigeration System
PS-2024 Turbine Driven Compressor
PS-2105 Double Pipe Heat Exchanger

PS-2200 Heat Transfer Lab

PS2201 Natural and Forced Heat transfer from Fin-Pin.
PS2202 - Natural Convection in Vertical specimen Apparatus
PS2203 - Forced Convection in Hollow Horizontal tube Apparatus
PS2204 - Film wise and Drop wise Condensation
PS-2205 Unsteady state heat transfer analysis / Transient heat conduction

PS-5070 Utilities System

PS-5071 Water Treatment Plant
PS-5072 Water Desalination Plant
PS-5073 Nitrogen Generation Plant

PS-5000 Energy Generation

PS5030 Boiler Operations Simulator
PS5040 Turbine Operations Simulator
PS5050 Electrical Operations Simulator
PS5060 Balance of Plant (BOP)
PS5014 Combined Cycle Power Plant
PS5015 Thermal Power Plant
PS5016 Diesel Generator
PS5017 Nuclear Power Plant
PS5018 Hydroelectric Power Plant
PS2018 Gas Turbine
PS5019 100 KW Solar Power Plant
PS5020 10 MW Wind Mill Farm
PS9009 Green Hydrogen Production Plant

ProSimulator™ Standard Process Models

PS-2300 IC Engine Lab	PS-5100 Industrial Power Plant
PS2301 Performance Test on 4-stroke Diesel Engine PS2302 Heat Balance Test on 4-stroke Diesel Engine PS2303 Morse Test on Multi-Cylinder Petrol Engine PS2304 Retardation Test on a Diesel Engine PS2305 Performance and Energy Balance Test on a Stream Turbine	PS5101 350 MW Gas Turbine PS5102 210 MW Thermal Power Plant PS5103 600 MW Thermal Power Plant PS5104 100MW Thermal Power plant PS5105 300MW Thermal Power plant PS5106 200 MW Thermal Power Plant – AFBC Boiler

PS0020: Model Development Package

ProSimulator™ Model Development package is a totally integrated set of simulation software development modules for process plants. It is a platform for engineers to configure, test, and document dynamic simulation models for process and power plants. The model configuration is template based and easy to build. The package consists of Simulation database, Simulation model library, Instructor configuration utility, Operator station configuration utility, Graphics builder and Model view / debugger.

ProVFO: VR and 3D Field Operations Suite

The ProVFO is a next generation Virtual Field Operations simulation training module, based on Virtual Reality (VR) technology. It is an interactive 3D virtual plant to assist the trainees to envisage and efficiently get hands on experience of the actual plant. It works with ProSimulator™ as an integrated module with real time communication.

Client List – Industries

Refineries

- Canada Oil Sands Surmont 2, Canada through Omega Simulation Co.
- Chennai Petroleum Corporation Limited thru' Yokogawa
- Chennai Petroleum Corporation Limited, Chennai, India.
- HPCL Mittal Energy Limited (HMEL) through Yokogawa
- Indian Oil Corporation Limited, Guwahati Refinery, India
- LUBREF, Kingdom of Saudi Arabia through Yokogawa
- Marjan Increment Development Program (MIP) through Yokogawa
- Nagarjuna Oil Corporation Limited, Chennai, India.
- Oman Refinery Company, Oman.
- Petro Rabigh, Saudi Arabia thru' Omega Simulation Co.
- Petron Batan, Philippines thru Yokogawa
- Refinery in Saudi Arabia through RSI SIMCON.
- Takreer Refinery, U.A.E through Yokogawa
- Takreer RRW, through Yokogawa

Gas / Oil Separation

- ADCO through Yokogawa
- ADMA ALNASAR through Yokogawa
- BGC, through Yokogawa
- BP Khazzan, Oman through Yokogawa
- Cygnus, UK through Yokogawa
- ELMERK, Algeria through Yokogawa
- FADHILI through Yokogawa
- Fadhili, Saudi Arabia through Yokogawa
- GASCO through Yokogawa
- Hassi Messaoud LPG, Algeria through Omega Simulation Co.
- HNGL Gas Plant, Hawiyah, through Yokoga
- IOGR, India through Omega Simulation Co.
- ISG, Algeria through Omega Simulation Co.
- Khurais, Saudi Arabia through Omega Simulation Co.
- KOC, Kuwait through Yokogawa
- KPF, KSA thru Yokogawa
- Kuwait Oil Corporation (KOC), Kuwait.
- Petroleum Development Oman L.L.C (PDO), Oman.
- PTT, Thailand thru' Yokogawa
- PTTEP, Thailand thru' Yokogawa
- Qatar Petroleum, Doha, KSA.
- Saudi Aramco Master Gas project, KSA thru Yokogawa
- Shaybah NGL OTS.
- SVDN Gas Plant, Vietnam through Yokogawa
- TOTAL MOHO NORD, Congo through Yokogawa
- TTMS, Thailand thru' Yokogawa
- West Nile Delta, Egypt through Yokogawa
- ZADCO through Yokogawa

Fertilizers

- Brunei Fertilizers, thru' Yokogawa
- CAMAU Fertilizers, Vietnam thru' Yokogawa
- Coromondel International Ltd, Kakinada, India.
- Coromondel International Ltd, Vizakh, India.
- Foskor Pte Ltd, Richards Bay, South Africa.
- Greenstar Fertilizers Limited, Tuticorin.
- Indorama Eleme Fertilizers & Chemicals Limited, Nigeria.
- Maaden Phosphate III Ammonia plant, K.S.A thru' Omega Simulation.
- MAADEN Phosphate through Yokogawa
- Madras Fertilizers Limited, Chennai, India.
- Mangalore Chemicals & Fertilizers Limited, Mangalore, India.
- Matix Fertilizers Corp. Ltd, West Bengal, India.
- Paradeep Phosphate Limited, Odisa.
- Rashtriya Chemicas & Fertilizers Limited, Mumbai.
- SAFCO, KSA thru Yokogawa

LNG Storage Terminal / LNG

- Dhamra LNG terminal, India. thru' Omega Simulation Co
- Adriatic LNG Terminal, Italy thru' Omega Simulation Co.
- BP Tangguh LNG OTS, Indonesia thru Yokogawa
- CALCASIEU Pass LNG Export terminal thru' Omega Simulation
- GNL Quintero, Chile LNG Terminal, Italy thru' Omega Simulation Co.
- Hazira LNG Terminal Ltd (HLPL) thru' Yokogawa
- South Hook LNG Terminal, Italy thru' Omega Simulation Co.
- YAMAL, Russia through Yokogawa

Power & Utilities

- Az-Zour Combined Cycle Gas Turbine Plant, Kuwait thru Yokogawa
- Bhabha Atomic Research Centre, Mumbai, India.
- Electric Company of Ghana.
- Electric Generation Co Inc., Turkey.
- ESSAR Power plant thru' ABB
- Fuji Oil Company, Japan.
- IGCAR, Kalpakkam, Tamil Nadu, India.
- IPMA, Bhopal.
- Kinyerezi-II power plant, Tanzania through Yokogawa
- OEG India Ltd, Chennai, India.
- Pertamina Refinery, Indonesia through Yokogawa
- TATA Power Company, Mumbai, India.
- Volta River Authority, Ghana.
- Wartsila India Pvt. Ltd

Petrochemicals / Chemicals / Pharma

- APOC, Kingdom of Saudi Arabia.
- Ethylene plant in USA through Omega Simulation Co.
- FPCC Taiwan thru' Omega Simulation Co.
- InoChem, Saudi Arabia.
- Jubail Chemical Industries Co, KSA.
- JUPC EOEG-3, Jubail, K.S.A thru' Omega Simulation.
- NIGC Phase 8 (Saudi Arabia) thru' Omega Simulation Co.
- Petronas RAPID HDPE thru' Yokogawa
- SABIC Phenol Plant, USA thru Yokogawa
- SHINTECH, USA through Omega Simulation Co.
- Tamilnadu Petroproducts Limited, Chennai, India.
- TCI Sanmar Chemical SAE, Egypt

Engineering Consulting

- ABB India Limited.
- AVEVA Solutions India LLP.
- BPT Norway.
- CORYS / RSI Simcon / Trident, USA.
- CORYS France.
- Fantoft Process Technologies / Kongsberg, Norway.
- Honeywell Automation India Ltd.
- Mahindra Satyam (formerly Satyam Computer Services), India.
- NESTE Engineering Solutions Oy.
- Omega Simulation Company, Japan.
- SCIENSIM Sdn Bhd, Malaysia.
- SVL Engineering Pvt Ltd, Chennai, India.
- Yokogawa Corporation of America.
- Yokogawa Engineering Asia Pte Ltd, Singapore.
- Yokogawa Europe Solutions B.V., Netherlands
- Yokogawa India Limited, Bangalore, India.
- Yokogawa Middle East B.S.C, Bahrain.

Client List – Academics

Southern India

- Adhiparasakthi Engineering College.
- Alagappa College of technology, Anna University-Ceramic Technology
- Alagappa College of technology, Anna University-Chemical Engineering
- Alagappa College of technology, Anna University-Food Technology, Chennai.
- Alagappa College of technology, Anna University-Industrial Biotechnology
- Alagappa College of technology, Anna University-Petroleum Engineering
- Alagappa College of technology, Anna University-Pharmaceutical Technology
- Andhra University, Vizag.
- Annai JKK Sampoorani Ammal Polytechnic College, Erode.
- Annamalai University.
- BIET,Davangere.
- BMS College of Engineering, Bangalore.
- Central University of Karnataka, Gulbarga.
- Coimbatore Institute of Technology, Coimbatore
- Coimbatore Institute of Technology, Coimbatore.
- CPCL Polytechnic College, Chennai.
- CSIR – IICT Hyderabad
- Dayananda College of Engineering, Bangalore.
- Dharmambal Polytechnic, Chennai.
- Dr. MGR University
- Er. Perumal Manimegalai Polytechnic College, Hosur.
- Global Institute of Technology, Arcot.
- Government College of Engineering, Bargur.
- Government College of Engineering, Thanjavur.
- Government College of Technology, Coimbatore
- Hindustan Institute of Engineering & technology
- Indian Polytechnic College, Tirunelveli.
- Institute of Chemical Technology, Taramani.
- Institute of Energy Studies, Anna University, Chennai.
- Institute of Energy Studies, Anna University.
- Jaya Engineering College, Chennai.
- JCT College of Engineering & Technology, Coimbatore.
- KAAVERY College of Engineering, Mettur.
- Kavery Polytechnic College, Salem.
- Kongu Engineering College.
- Kongu Polytechnic College.
- Kongu Vellalur Polytechnic College, Erode.
- Madha Engineering College, Chennai.
- Manipal Institute of Technology.
- Meridian School of Oil & Gas, Chennai.
- Nanda Polytechnic College, Erode.
- NIT Warangal.
- Prathyusha Engineering College, Tiruvallur.
- PSG College of Technology, Coimbatore.
- Rajiv Gandhi College, Chennai.
- REC Hulkoti.
- RKM Polytechnic College, Mylapore.
- Rohini College of Engineering & Technology, Palkulam.
- S. Thangapazham Polytechnic College, Tirunelveli Dist.
- SASTRA University Thanjavur.
- Sathayabama Institute of Science & Technology, Chennai.
- SDM Engineering, Dharwad.
- Sethu Institute of Technology, Pulloor.
- Shree Venkateswara Hitech Polytechnic College, Erode.
- Sree Sastha Institute of Engineering & Technology, Chembarambakkam.
- Sri Jayaram Institute, Chennai.
- Sri Muthukumaran Institute of Technology, Chennai.
- Sri Venkateswara College of Engineering, Sriperambatore.
- SRKV Polytechnic College, Coimbatore.
- St. Peter's College of Engineering & Technology, Chennai.
- SVS College of Engineering, Coimbatore.
- Tamil Nadu Skill Development Corporation (Naan Mudhalvan)
- Thanthai Roever Institute of Polytechnic College, Peramballur.
- Vellore Institute of Technology, Vellore.
- Vivekananda Institute of Technology, Bangalore.

Northern India

- Aligarh Muslim University.
- Banasthali University.
- BIET Jhansi.
- CIPET-IPT, Bihta
- CIPET-IPT, Jaipur
- DCRUST, Sonipet.
- Deenbandhu Chhotu Ram University of Science and Technology.
- Dr. APJ Abdul Kalam Technical University, Lucknow.
- Government Eng. College, Ujjain.
- HBTI, Kanpur.
- Kurukshetra University.
- Madan Mohan Malaviya University of Technology, Gorakhpur
- Madhav Institute of Technology & Science, Gwalior.
- MNIT Jaipur.
- University of Petroleum & Energy Studies, Chemical Engineering Dept.
- University of Petroleum & Energy Studies, Electrical Engineering Dept.

Eastern India

- Calcutta University.
- Jadavpur University.
- JIS Engineering College.
- NIT Silchar.

Western India

- Bharti Vidyapeeth University College of Engineering, Pune.
- C K Pithawala College of Engineering and Technology, (CKPCET).
- Dr. Babasaheb Ambedkar Technological University
- Government. Engineering College, Gandhinagar.
- Government. Polytechnic, Gandhinagar.
- Institute of Technology, Nirma University.
- J.K Institute of Technology, Rajasthan.
- Keystone Engineering, Pune.
- Loyola Training Center, Gujarat.
- MIT Academy of Engineering, Pune.
- MIT WPU, Pune
- NMIET, Pune.
- Pandit Deenadayal Petroleum University, Gujarat.
- Rajashree Industrial Training Institute Gujarat.
- SV NIT, Surat.
- Walchand College of Engineering, Sangli.

Training Institutes

- GIL Automation, Nigeria.
- Indian Institute of Petroleum, Dehradun.
- Jubail Technical Institute, K.S.A., Chemical Eng. Dept.
- Jubail Technical Institute, K.S.A., Electrical Eng. Dept.
- Meridian school of oil and gas Pvt. Ltd.
- Petro Vietnam Manpower Training College, Vietnam.
- Technocrat Automation Solution Pvt Ltd.
- Yanbu Technical Institute, K.S.A.

Virtual Twin Software Solution

Bringing Industries to the Classroom

Hands on Training | Skilling | Employability

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