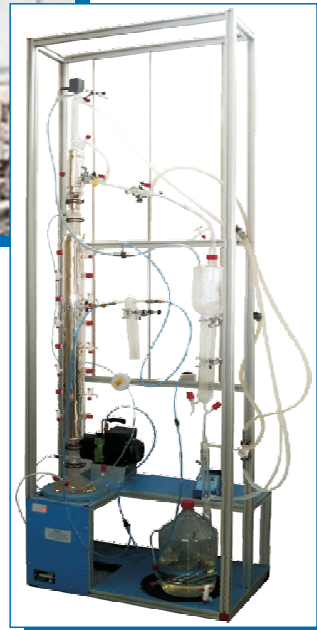


PETROLEUM TRAINING CENTER (11PTC)



* Center:

* Country:

* Date:

* Issue:

Quality Certificates:



ISO 9000: Quality Management
(for Design, Manufacturing,
Commercialization and After-sales service)



European Union Certificate
(total safety)



Certificates ISO 14000 and
ECO-Management and Audit Scheme
(environmental management)



Worlddidac Quality Charter
Certificate
(Worlddidac Member)

Petroleum Training Center

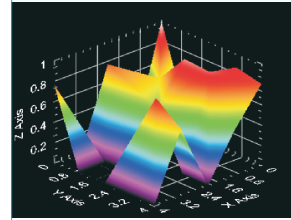
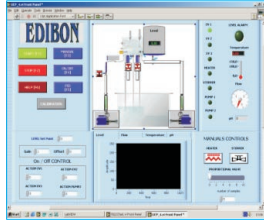
(11PTC)

Index

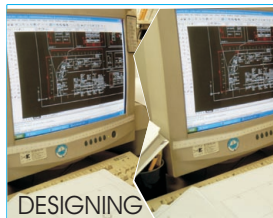
- Project content.
- Technical areas included.
- Economical Proposal.
- Classroom and Laboratory Lay Out (example)
- Main target.
- Project options covered.
- Project conditions
- Teaching techniques used.

Project content

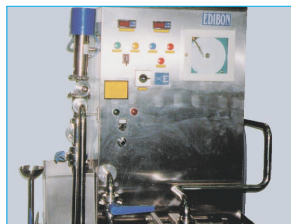
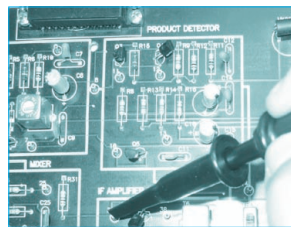
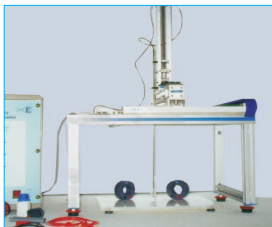
Modern design



Main blocks



Products



Full units design



Technical areas included

- * Electronics.
- * Electricity.
- * Energy.
- * Automation and Systems
- * Fluid Mechanics & Aerodynamics.
- * Thermodynamics & Thermotechnics.
- * Process Control.
- * Chemical Engineering.

Note: The complete technical design "is ready" at our premises

Economical Proposal

List of all modules included in technical areas:

"Priority 1"

0200. Electronics

0210: Elementary Electronics. Basic Module.

0232: Controllers

0400. Electricity

0430: Industrial Electric Installations. Basic Module

0450: Energy Installations. Basic Module

0600. Automation & Systems

0620: PLC Process Emulators Applications Module

0621: PLC Small Scale Real Applications Module

0800. Fluid Mechanics & Aerodynamics

0820: Fluid Mechanics. Basic Module

0831: Pumps. Medium Module

0832: Pumps. Advanced Module

0900. Thermodynamics & Thermotechnics

0950: Heat Transfer. Basic Module

0951/PLC: PLC's Module

0953: Heat Exchange. Basic Module

0954: Heat Exchange. Medium Module

0954/PLC: PLC's Module

0981: Turbines "Thermal" Module

0982: Turbines "Two-Shaft Gas" Module

0983: Turbines "Axial Flow Gas" Module

1000. Process Control

1010: Process Control. Basic Module.

1100. Chemical Engineering

1110: Chemical Engineering. Basic Module

1111: Chemical Engineering. Medium Module

1112: Chemical Engineering. Advanced Module

1120: Chemical Process. Basic Module

SCADA-NET System (30 students working simultaneously)

- EDIBON Scada-Net for being used with Fluid Mechanics and Thermodynamics & Thermotechnics and units

- EDIBON Scada-Net for being used with Process Control & Chemical Engineering units

"Priority 2"

0500. Energy

0520: Energy: Advanced Power Plant Simulator. Basic Module

0200. Electronics

0211: Elementary Electronics. Medium Module

0212: Elementary Electronics. Advanced Module

0230: Transducers and Sensors Module

0231: Sensors Instrumentation

0240: Control Electronics Module

0250: Digital Electronics Module

0260: Industrial Electronics Module

0400. Electricity

0431: Industrial Electric Installations. Medium Module

0800. Fluid Mechanics & Aerodynamics

0820/PLC: PLC's Module

0831/PLC: PLC's Module

0832/PLC: PLC's Module

0833: Fan-Centrifugal Module

0833/PLC: PLC's Module

0834: Fan - Axial Module

0834/PLC: PLC's Module

0841: Turbines "Hydraulic Machines-Water". Medium Module

0841/PLC: PLC's Module

0842: Turbines "Hydraulic Machines-Air" Module

0842/PLC: PLC's Module

0900. Thermodynamics & Thermotechnics

0910: Refrigeration. Basic Module

0930: Air Conditioning. Basic Module

0951: Heat Transfer. Medium Module

0952/PLC: PLC's Module

0953/PLC: PLC's Module

0970: Nozzles Module

0970/PLC: PLC's Module

0981/PLC: PLC's Module

0982/PLC: PLC's Module

0983/PLC: PLC's Module

1000. Process Control

1010/PLC: PLC's Module

1011: Process Control. Medium Module

1100. Chemical Engineering

1110/PLC: PLC's Module

1111/PLC: PLC's Module

1112/PLC: PLC's Module

1121: Chemical Process. Medium Module

"Priority 3"

0500. Energy

0520/PTC: Energy: Advanced Power Plant Simulator. Petroleum Module

0200. Electronics

0432: Industrial Electric Installations. Advanced Module

0952: Heat Transfer. Advanced Module

0960: Steam Module

0980: Combustion Module

0980/PLC: PLC's Module

1011/PLC: PLC's Module

1020: Industrial Process Module

1020/PLC: PLC's Module

1120/PLC: PLC's Module

1121/PLC: PLC's Module

1130: Special Chemical Process Advanced Module

1130/PLC: PLC's Module

Services:

* Furnitures

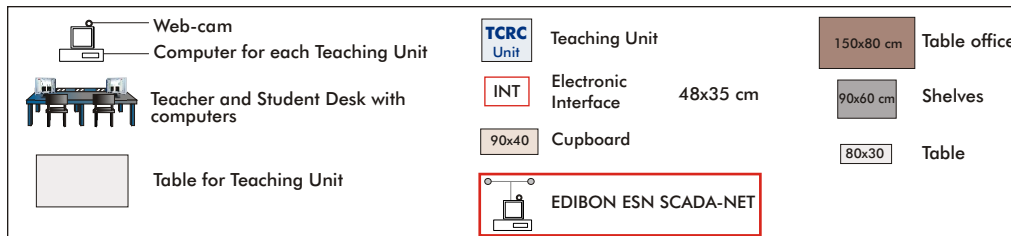
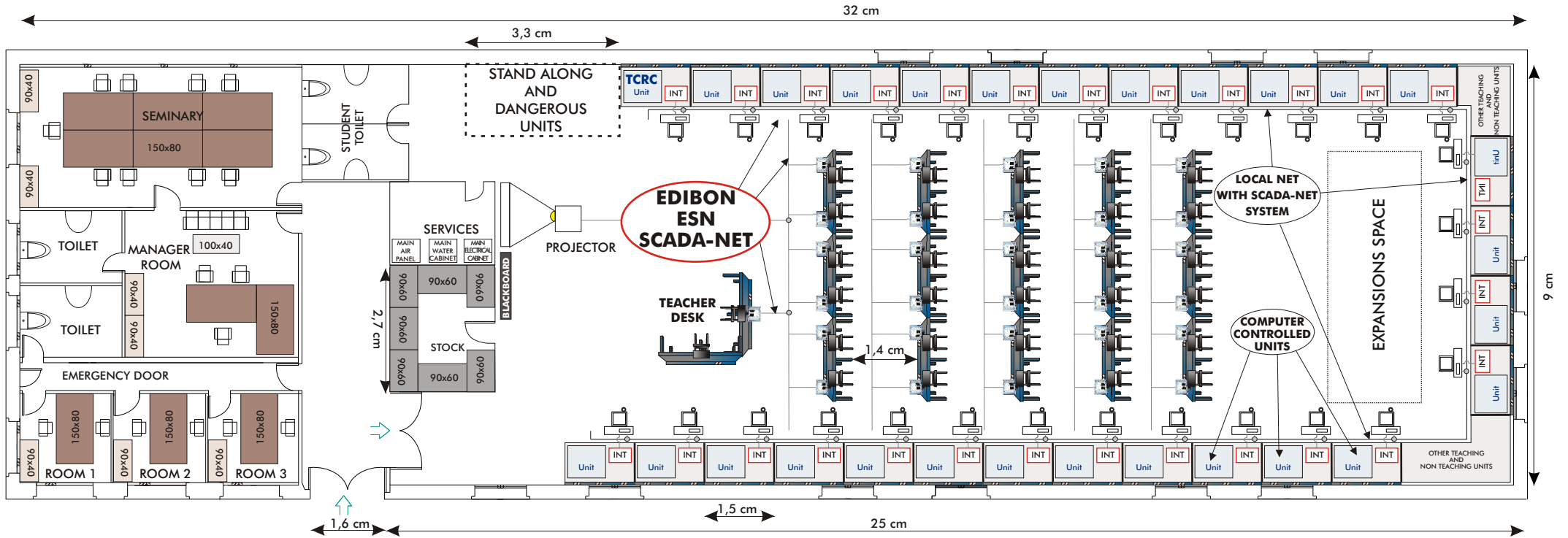
* Electrical, Water and Air Installation and others laboratory services

* Installation of all units supplied, Starting up, Training, Teacher Training and Technology Transfe

Note: The complete technical design "is ready" at our premises

Classroom and Laboratory Lay Out (Example)

PETROLEUM TRAINING CENTER (11PTC)



E: 1:100

Main target

* To help the students:

- By "quick" understanding.
- By "clear" understanding (clear concepts).
- By "saving" time.
- By "extending" the laboratory to their homes.

* To help the teachers:

- By "easy" teaching.
- By increasing the teaching "efficiency".
- By "reducing" teaching costs (less time consume).
- By "integrating" classroom and laboratory in the same place.

Project options covered

This “*Petroleum Training Center*” will cover the following:

- a) To train students at laboratory.
- b) To train trainers.
- c) To be used for training and update educators in current teaching technologies.
- d) To give courses to workers in the industry, as it simulates industrial process.
- e) To be used for carrying out applied research, in several processes and different technical areas.
- f) To be used as research tool for international projects.
- g) To train other countries teachers.
- h) To get financial resources (Self-financed projects).

Project conditions

The "Petroleum Training Center" includes the following technical and commercial conditions:

a) Technical conditions:

- Laboratories adaptation.
- Installation of all units supplied.
- Starting up for all units.
- Training about the exercises to be done with any unit.
- Teacher training related with the teaching unit and the teaching techniques used.
- Technology transfer.

b) Commercial conditions:

- Packing.
- Financing Charges.
- C.I.F. Charges.

c) Other conditions:

- 8 Manuals for each teaching equipment:
 - . Required services manual.
 - . Assembly and installation manual.
 - . Interface and software/control console manual.
 - . Set in operation manual.
 - . Safety norms manual.
 - . Practices manual.
 - . Maintenance manual.
 - . Calibration manual.

TEACHING TECHNIQUES USED

3D. EDIBON THREE DIMENSIONS SYSTEM



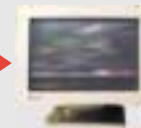
Unit



Interface



Data acquisition board



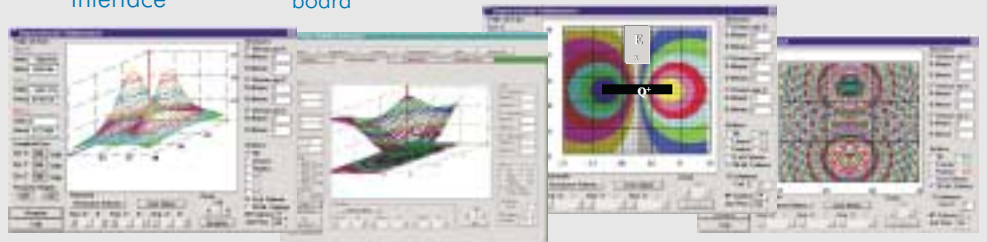
Software

Software included:

- Control
- Data Acquisition
- Data Management

Used for:

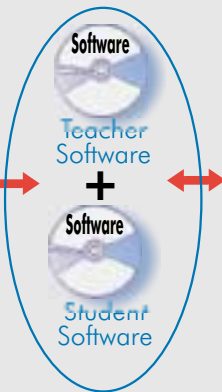
Physics (Magnetic fields, Electrical fields, Mechanics, Acoustics, Optics, Thermodynamics and Fluid Mechanics)



CAI. COMPUTER AIDED INSTRUCTION SYSTEM

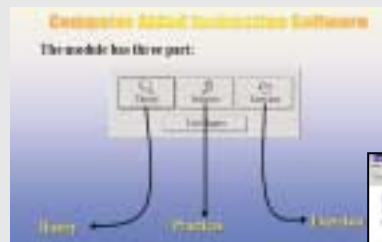


Unit



Used for:

Basic Electronics and Electricity. Communications. Basic Mechanics. Basic Fluid Mechanics.



EDAS. EDIBON DATA ACQUISITION SYSTEM



Unit



Interface



Data acquisition board

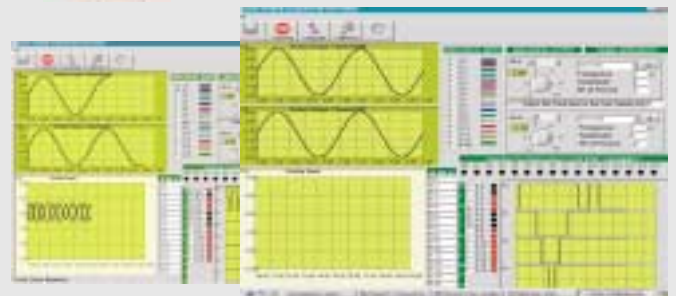


Software

Data Acquisition Software

Used for:

Basic Electronics. Communications. Electricity.



RTC. EDIBON SYSTEM FOR HIGH ELECTRONICS (Real time control)



Unit



Data acquisition board



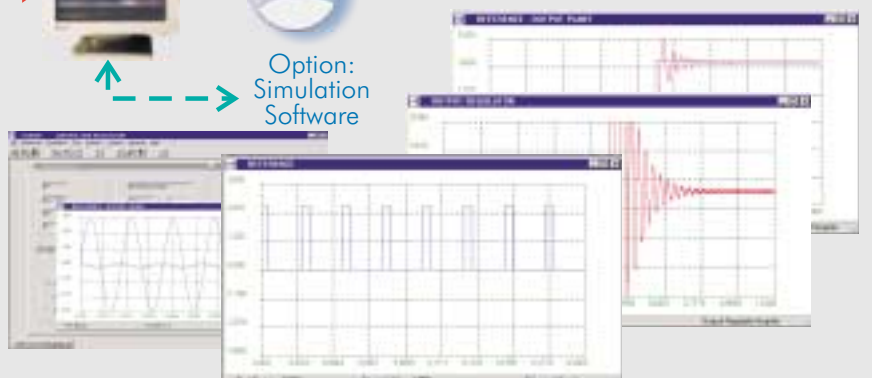
Software

Control Software

Option: Simulation Software

Used for:

High Tech Electronics (Control Electronics, Digital Electronics and Industrial Electronics).



HYBRID. EDIBON TEACHING HYBRID SYSTEM (ENERGY)

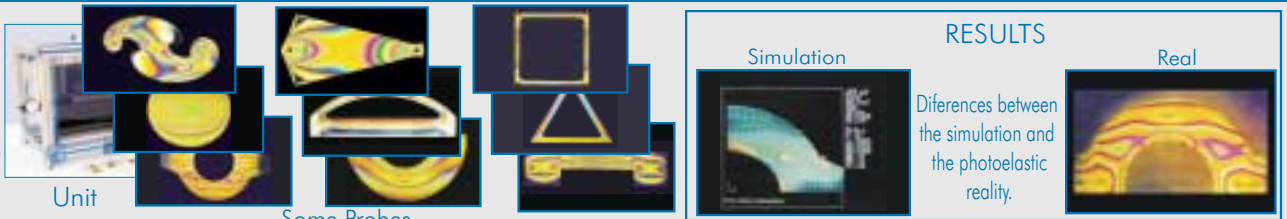
EDIBON PATENT

Used for:
Energy Power Plants.



PHOTOELASTICITY

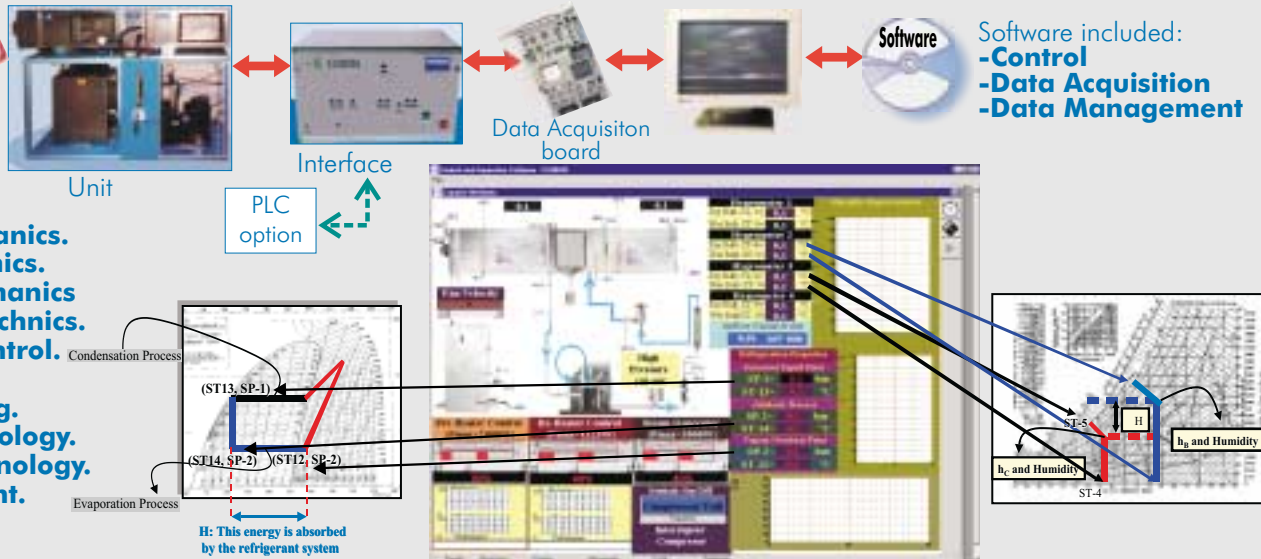
Used for:
Strength of Materials.



SACED. EDIBON COMPUTER CONTROL SYSTEM: Control+Data Acquisition+Data Management

EDIBON PATENT

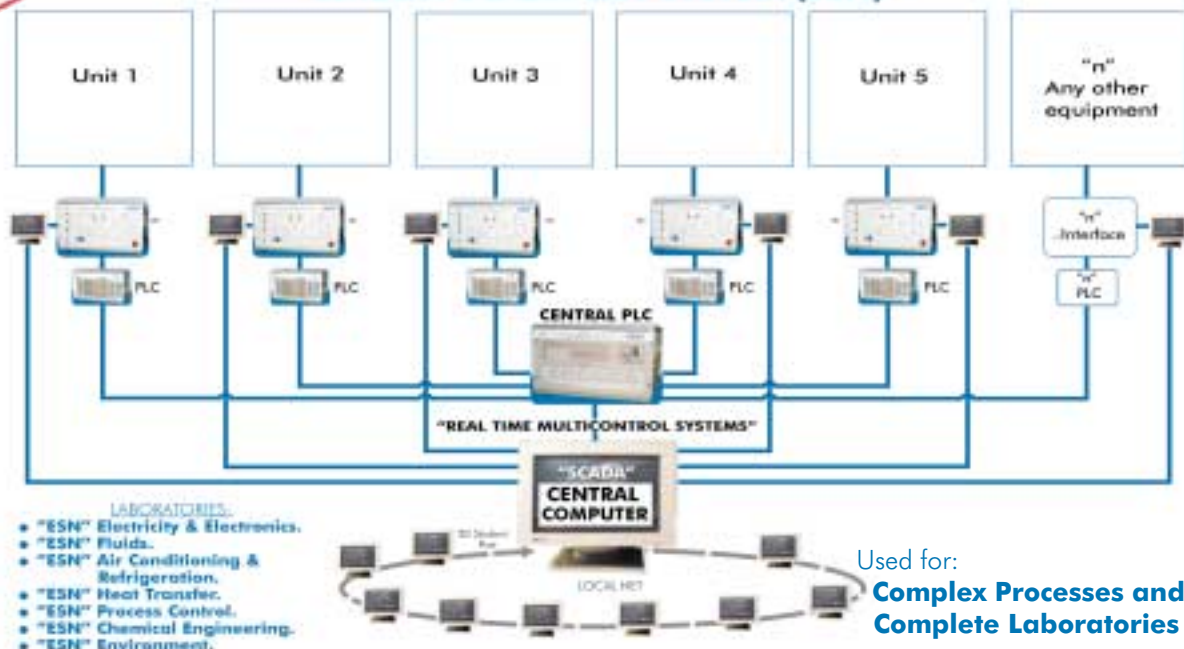
Used for:
**Fluid Mechanics.
Aerodynamics.
Thermodynamics & Thermotechnics.
Process Control.
Chemical Engineering.
Food Technology.
Water Technology.
Environment.**



ESN. EDIBON SCADA-NET SYSTEM

EDIBON PATENT

EDIBON SCADA-NET SYSTEM (ESN)



Used for:
Complex Processes and Complete Laboratories