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PIMS is a relational data base system developed to manage project information. PIMS greatly reduces project engineering time by minimizing paper flow, reducing errors, minimizing rework, and enhancing project communications and teamwork. However, **PIMS** is not merely a program, but rather a new concept defining how to improve efficiency and thus profitability. We intend to work closely with a Client in developing procedures to best utilize the organizational power of **PIMS**.

PIMS was developed by engineers, not programmers, who understand the tasks and relationships required to execute a project. It was also developed with consideration to ISO 9000 and OSHA 1910 requirements to control project changes and quality.

KEY FEATURES:

COMPATIBILITY

Windows Based: Windows 3.1, Windows For Work Groups 3.11, Window NT, Windows 95/98/ME/XP/2000

LAN or Distributed Network

Efficient Resource Utilization

PORTABILITY

Import Data from Process Simulators

Custom Import from Customer Process Simulators

Export Data to other Windows Based Applications.

Import/Export Data via SQL/ODBC Procedures: This would include other data bases or applications that support ODBC.

STRUCTURE

Process data is loaded into **PIMS** by extraction from Process Simulators and Internal Properties Generators for generic commodities such as steam and water. Other properties generators can be built in, per customer requirements. Input units for all modules are English. The output units can be selected as English, Old Metric or SI. Data conversion can be done at any time in the project.

Project data can be segregated by Unit Number and Case Number. As an example; multiple occurrences of equipment tag numbers are allowed if the item belongs to a specific unit or a specific case definition. This also applies to piping line numbers, process stream numbers, or any other item numbers.

In some cases it is necessary to list compositions. Compositions are unit specific. Initially a unit composition is created which should agree with the process simulator. The sequence and names of components cannot be changed within a unit. Compositions will appear where required; such as burners, furnaces, compressors, etc., on Composition Summary Sheets.

As the data base is populated, Equipment Data Sheets, Instrument Data Sheets, Motor Lists, Equipment Lists, Line Schedules, and others are automatically created.

Documents, such as, Process Flow Diagrams, Piping Drawings Instrumentation Drawings, Spreadsheets, Text, etc, are made available to the project team via internal and external viewers. Documents are linked to specific items via Document Registry. Vendor drawing may be scanned into the system and associated with specific items as they are available. This gives the project team immediate access to all project data.

Efficient programming limits project data (excluding drawings) to less than 5 megabytes. **PIMS** is easily portable or **accessible through the Internet** allowing utilization for HAZOP, startup personnel and client reviews.

The core structure of **PIMS** includes General Process Data Sheets (such as TEMA exchangers), API Pump Data Sheets, ISA Instrument Data Sheets, and others. Our service provides various levels of custom programming. Data extraction routines can be written to facilitate extraction of information from the customers proprietary software or existing data bases by ODBC or SQL links. Customer equipment specifications can be incorporated, populated, and linked with **PIMS**.

CORE MODULES PROVIDED**Project Specific Data**

Site Data
Project Definition
Document Management
Staff Directory
Management of Change Menu
Project Directives
Process Input Menu/Extraction Procedures
Process Procedures Steam/Water/Superheated Steam Properties
Component Input Menu
Utility Summaries

Piping Data

Piping Commodities
Piping/Vessel Insulation
Piping Specification Data
Line Sizing/Line Hydraulics (Vapor/Liquid/Mixed Flow)
Nozzle (Shared with Equipment)
Piping Specialties
Piping Fittings
Thermowells

Instrument Data

Control Valves
Relief Valves
Flow Elements
Temperature Elements
Level Elements
Pressure Elements

Equipment Data

Pressure Vessels
Heat Exchangers
Shell & Tube
Boiler
Aerial
Plate/Frame
Rotating Equipment
Pumps
Blowers
Compressors
Mixers
Motors
Fired Equipment
Boiler
Furnace
Burners
Cooling Tower
Tanks

Sample Piping Input Menu

Flying J [Window Controls]

File Project Edit Process Piping Equipment Instruments Reports

PIPE [Dropdown] LineNumber [Dropdown] [Icons]

Piping Summary [Close]

Last Updated: Jul 17, 2006 Revision Reference No. [Field]

Line Number: 1 Unit Number: 29 Drawing: PFD-1 Revision: A

Process Stream: 1 Case: DESIGN Unit Number: 29 Stream Multiplier: 1.100

Specification: B1BSR O.D., Inches: 10.00 I.D., Inches: 10.020 Roughness Factor: 0.00015

< from: OSBL to >: 29-V41 PWHT Commodity: SG Exclude from List

Cold Hot Personnel Jacketed Steam Tracing Electric Trace None
 Other: ST Insulation Type: CALCIUM SILICATE Thickness, Inches: 1.50

Procedure: Churchhill Design Basis: Process Conditions 235.0 °F 47.0 Psig

SOUR FEED OSBL TO 29-V41 | **29-1- 10.00-CSSR-150-ST 1.50** | **Turbulent**

Mass Flow, lb/hr: 14,248.3 Psi per 100 ft: 0.096 Velocity, ft/sec: 69.5 Phase: VAPOR

Operating Temp, °F: 185.0 Pressure, psig: 17.0 Reynolds Number: 674,741 [Update Line]

Total Equivalent Length: [Field] Line Loss, psi: [Field] RHO V²: 502 [Update All]

Notes: [Text Area] Warnings: [Text Area]

[Fittings] [Specialties] [Views] [Reports]

[Icons] [INS]

Ready

Sample Process Input Menu

Process Data Input Menu

Last Updated: May 16, 2006 Revision Reference

Process Stream: 1SW Unit Number: 29 Case: DESIGN Commodity: SW

Stream Description: SOUR WATER FROM 29-D41 Procedures: Water

Pressure, psia: 26.4 Temperature, °F: 120.0 Output to Material Balance

Critical Temperature, °F: 701 Critical Pressure, psi: 3206 Drawing No.:

VAPOR		LIQUID	
Mass Flow, Lb/hr		Mass Flow, Lb/hr	12,351.0
Molecular Weight		Molecular Weight	18.015
Density, lb/ft ³		Density, lb/ft ³	61.6
Viscosity, cp		Viscosity, cp	0.6
Heat Capacity, Btu/lb-°F		Heat Capacity, Btu/lb-°F	0.997
Thermal Conductivity, Btu/hr-ft-°F		Thermal Conductivity, Btu/hr-ft-°F	0.370
Enthalpy, Btu/lb		Enthalpy, Btu/lb	86.79
Compressibility		Vapor Pressure, psi	26.40
Latent Heat, Btu/lb		Surface Tension, Dynes/cm	
Notes		Standard Specific Gravity	

Buttons: Composition Views Summary

Ready INS