



مدرس:
مهدی ضیائی

تحصیلات

- کارشناس مکانیک سیالت دانشگاه دولتی کاشان
- کارشناس برق الکترونیک دانشگاه آزاد تهران جنوب

سوابق فعالیت

- مدیرعامل شرکت مهندسی avevaplant
- همکاری با نماینده رسمی شرکت AVEVA در ایران به عنوان مدرس رسمی نرم افزارهای زیر به منظور یکپارچه سازی بین مدارک و بخش های مهندسی تحت پلتفرم AVEVA:
AVEVA Diagrams - AVEVA Engineering - AVEVA E3D - AVEVA Instrumentation - AVEVA Electrical
- همکاری در یکپارچه سازی مدارک مهندسی و مدل سه بعدی در پروژه تصفیه خانه مربوط به شرکت آب و فاضلاب شهر پاریس توسط نرم افزارهای:
AVEVA E3D - AVEVA Instrumentation AVEVA Diagrams - AVEVA Engineering
- انجام پروژه های یکپارچه سازی مدارک مهندسی و مدل سه بعدی توسط نرم افزارهای AVEVA برای پروژه ها و شرکت های داخل کشور
- کارشناس کنترل و ابزار دقیق در شرکت چگالش به مدت ۱۰ سال
- کارشناس پایپینگ و مدل سازی سه بعدی در شرکت پترو پالا محور به مدت ۵ سال
- سابقه تدریس مجموعه نرم افزارهای AVEVA به مدت ۱۲ سال

پروژه‌های اجرایی

- فاز ۱۴ پارس جنوبی
- فاز ۱۹ پارس جنوبی
- پروژه ایزومراسیون و نفتای سبک پالایشگاه شهید تندگویان تهران
- پروژه تصفیه گازوئیل پالایشگاه اصفهان
- طرح شیرین‌سازی پتروشیمی بوعلی سینا
- طرح فرآورش سیار نفت خام
- طرح ذخیره‌سازی گاز میدان سراجیه قم
- طرح توسعه میدان نفتی آذر
- پروژه پالایشگاه الفروقلوس
- طرح توسعه میدان نفت آزادگان شمالی
- مطالعات مفهومی و طراحی پایه ساخت مخازن ذخیره نفت و تأسیسات جانبی بندر جاسک
- طرح آبرسانی توسعه تصفیه‌خانه و شبکه آب آتش‌نشانی فرودگاه بین‌المللی امام خمینی

دوره‌های آموزشی برگزار شده

- سابقه تدریس در بسیاری از شرکت‌ها و آموزشگاه‌های معتبر در سراسر کشور:
- شرکت مهندسين مشاور نارگان
 - شرکت مهندسين مشاور سازه
 - شرکت مهندسين مشاور مונنکو ايران
 - شرکت طراحی و مهندسی صنایع پتروشیمی (پیدک)



- شرکت ساخت و مهندسی تأسیسات دریایی IOEC
- شرکت مهندسی و طراحی همپا انرژی (هدکو)
- شرکت مهندسی و ساخت توربین مپنا (توگا)
- شرکت مهندسی فولاد تکنیک
- شرکت مهندسی ناموران پژوهش و توسعه
- شرکت مهندسی مشاور ناردریس
- مجتمع صنعتی ذوب آهن پاسارگاد
- صنایع دریایی شهید همتی
- شرکت مهندسی انرشیمی
- شرکت مهندسی پتروساخت چهلستون
- شرکت مهندسی معیار صنعت خاورمیانه
- شرکت مهندسی آبسان زلال
- شرکت مهندسی پترو تدبیر ساخت
- آموزشگاه‌های معتبر سراسر کشور مانند: نوین پارسیان، فلات قاره و...

سابقه تهیه مدارک مهندسی

- Data sheet (Gauges, Transmitters, Flow elements, Receivers, Control valves, On/Off valves, Cables, Corrosion Coupon, etc.)
- Material Requisition, Material Take off, Hook-Up (pressure piping, mounting, Air piping, etc.) , Index, I/O list, set point & Alarm List, shut down Logic Diagram, Causes & Effects, Cable schedule, Main cable

route, Junction box & Gland, Wiring Diagram, Loop Diagram, Location Layout, ...

- Load List, Designing MV & LV Panel, Single Line Diagram, Schematic Diagram, KOL Diagram, Electrical Cable schedule, Cable Sizing, Simulation in Etap, Installation Detail Drawing, overall (UG/AG) Cable Routing Sections, ...
- Piping Arrangement, Plot Plan, Pipe & Fitting MTO, Isometric Drawing, Line List, Valve List, Equipment List, Nozzle List, ...
- Designing aboveground and underground piping, Equipment, Structures, Pipe Racks, Stairs & Ladders & Platform, Cable Tray & Ladder, Trench, Duct Bank, Lighting, 3D modeling of Cable, Cable Way, Cable Way Dressing, Panel & Floor, Clash check, report.
- Flow Element Sizing
- Control Valve Sizing
- Pressure Safety Valve Sizing
- Cable Sizing
- Technical clarifications with manufacturers and vendors in procurement stage
- Preparing TBE (Technical Bid Evaluation) document
- Checking vendor's document (VDR)
- Creating Specs and Catalogues in Paragon module of PDMS or E3D
- Designing aboveground and underground piping

- Creating Equipment, Structures, Pipe Racks, Stairs & Ladders & Platform, Cable Tray & Ladder, Panel & Floor in Design module of PDMS or E3D
- Piping Arrangement, Plot Plan, Pipe & Fitting MTO, Isometric Drawing
- 3D model Design review meetings with clients or internally by E3D or PDMS or Navisworks to preparing the best and most efficient routing for piping / cabling system network
- Using codes and standards like ASME, ASTM, API, IEC, NACE, ISA, DIN, BS, IPS, ...

فعالیت در زمینه مجموعه مهندسی و طراحی یکپارچه

I have the ability to work in all aspects (Administration, Engineering, Configuration, Drawing / Drafting) of the AVEVA Unified Engineering Suite softwares and making configurations to integration with other softwares in both versions of the Dabacon database and SQL database.

AVEVA Engineering

- Creation of Team, User, Database, Access control, Dbset, Maturity, Discipline, MDB in AVEVA Administration
- Creation of Conceptual model in the Configuration module: Classes, Attributes, Associations, List of Values, Measure Classes, Unit of Measure Unit Set

- Creation of required UDA & UDET, ... in the LEXICON. (In AVEA Engineering Revision 14)
- Configuration of Interdisciplinary project so that each department receives notifications for changes made by other engineering departments including:
 - Controlled Object Revisioning (COR)
 - Creating multi-disciplinary grids.
 - Status Controller implementation: Going through different customizable stages of the project (Working, Approved by PSL, Released, Rejected, Waiting for final vendor data, ...)
- Revision Configuration (Revision Block, Revision Number, ...)
- Creation of DB views and grids
- Creation of DB Views and Data Sheet templates to generate standard Lists like Load List, Instrument List, Cable List, Line List, Equipment List, Valve List, ...
- Creation of DB Views and Data Sheet templates to generate standard Data sheets for all engineering Disciplines (Mechanical, Electrical, Process, Instrumentation, ...)
- Creation of multi-disciplinary Data Sheets
- Document Pack
- Configuration for Import / Export from /To Excel file
- Revision Management for Data Sheets, Lists and Drawings

- Linked Documents (external relevant documents can be linked to tags in AVEVA database)
- Creation of cable catalogue, gland catalogue, I/O card catalogue, JB Catalogue, Enclosures, Instrument Catalogue, ...
- Creation of Motor catalogue.
- Creation of Compartment element catalogue like: HV/LV Circuit Breaker, Contactor, MCCB, Fuse, Meters, all type of relay, Measuring Transformer (CT, PT, ...), Switch, ...
- Creation of Compartment catalogue (protection, control, busbar, motor starter, ...)
- Creation of wiring rules
- Allocating instruments to junction box
- Creation of single and multi-Cables
- Creation of Foundation fieldbus segment.
- Automatic Cable Drumming
- Cable Sizing Configuration
- External Cable sizing Calculation
- Integration and Mapping with ETAP
- Creation of SLD and KOL Diagram
- Creation of Distribution Diagram
- Creation of Loop Diagram, Termination Diagram, Hookup Diagram, Cable block Diagram.

- Creation of fully customizable reports such as Line List, Valve List, Component & Fitting MTO, Equipment List, Transformer sizing, CB sizing, JB & Panel MTO, Gland MTO, I/O card MTO, Cable MTO, Hookup MTO, ...
- Creation of Compare & Update Configurations
- PML, C#, SQL (as per the requirements of the projects)

AVEVA Instrumentation & Electrical Ver12.2 (SQL Server Database):

- Initial configuration of AVEVA E&I in Ver12 (SQL Server Database) including: Create new project, Add plant area, Edit pick list, Property Definitions, Edit Process Unit ,Project voltages, Tag Formats, Class Definitions, Type Catalogue, AVEVA Integration Service, Loading Factor, Compartment Element Type, Cable Sizing Configuration, ETAP Integration Configuration, Datasheet Catalogue, AVEVA Cable Design Import Configuration, Creation of Drawing Templates (Creating all required blocks and attributes in AutoCAD file then assigning suitable datalink to the attributes of blocks), Creation of Seeds, Hook up Catalogue and Hookup Items, SLD, KOL, Load List, Instrument List, Loop List, Data Sheet, Termination Diagrams, ...
- AVEVA E&I Security Manager (Ver.12): Define group, user and set access level for all items.



AVEVA Diagrams

- Creation of all required stencils and templates
- Creation of all required project symbols as per “symbol and legend document” : Piping symbols (jacketed pipe, steam traced or electrical traced pipe, ...) , Gate valve, Globe valve ,Butterfly valve, Control valve, On/Off Valve with solenoid valve, Regulator valve ,safety Valve, 2/3/4 way valve, All type of Flow Elements ,Pump, Heat Exchanger, Separator, Mixer, Air Cooled Exchanger, Storage Tank, Flow Direction Sensitive Components for example: Check Valve, Cone type strainer, Spectacle blind normally closed or open, Filter, Trap, Reducer, Restriction Orifice, Actuator, ...
- Creation of all branching element as per branch table in PMS document of project (Equal Tee, Reducing Tee, Sockolet, Threadolet)
- Specifying Location of all symbols (Field, Local Panel, UCP, DCS, ESD, MMS)
- Cration of Tie-In Point Symbol used for Tie-In point list report
- Creation of SCPDES used for Vent to ATM, to safe location, Drain, ...
- Creation of Area Symbol used for package skid
- Specifying Type of Elements according to Identification Letters Table in symbol and legend and abbreviation document of project (First Letter / Succeeding Letter)

- Administrative settings in Diagrams Options and Creation of portable Diagrams Options xml file
- Creation of all required Instrumentation symbols: Transmitters, Gauges, Control Valves, Flow Elements, Alarms (HH, H, LL, L), Controller, Equipment levels alarms, All Signal Types: Pneumatic signal, Electrical signal (4-20 mA), Serial Link or software Link, Symbol for Tubing between flow element and D/P type Transmitters
- Creation of control loops in AVEVA Diagrams.
- Specifying default values for attributes for example: Normally closed or Open, Failure, I/O type, ...
- Creation of formatting rule according to Size, Insulation, Pipe Class
- Creation Off Page Connector, Spec Break, ...
- Batch Job, Design Reuse, Dimensioning, Change Specification
- Importing Piping, Piping Component, Equipment, Nozzle, Valve, Inline and Offline Instrument, ... from AVEVA Diagrams to AVEVA Engineering
- Importing all instruments, Loops and all related attributes from AVEVA Diagrams to AVEVA E&I (SQL Server database)
- Importing all instruments, Loops and all related attributes from AVEVA Diagrams to AVEVA Engineering
- Configuration of Compare & Update to communicate with, AVEVA Engineering, AVEVA E3D, ...

- Creation of all required project reports in AVEVA Diagrams or AVEVA Engineering for example: Piping components and Fitting BOM, Line List, Valve List, Instrument List, Equipment List, ...
- Release P&ID in AVEVA Diagrams to 3D to Use for creation of 3D Model in E3D

AVEVA E3D

- Automatic Creation of 3D Model from Smart P&ID Drawn in AVEVA Diagrams
- Linking Existing 3D Model with Smart P&ID Drawn in AVEVA Diagrams
- Creation of Spec and Catalogue and all relevant activities for piping components
- Designing aboveground and underground piping
- Slope Pipe, Pipe Ruter, NSBC, ...
- Equipment, Structures, Pipe Racks, Stairs & Ladders & Platform, Cable Tray & Ladder, Panel & Floor, ...
- Piping Arrangement, Plot Plan, Isometric Drawing
- Report Designer: Line List, Valve List, Equipment List, Nozzle List, Pipe & Fitting MTO, ...
- Standard Model & Equipment, Design Aids, Hole Manager, Clash check

- Creation of Panel & Plate & Negative extrusion
- Penetration & Opening in Panel / Section
- Creation of Section joints, Section fittings, Panel fittings, Connection Review
- Creation of Wall, Floor, Wall Fitting, Floor Fitting
- Comment on 3D Model
- Importing cable catalogue from AVEVA E&I (SQL database) to AVEVA Catalogue
- Cabling System in E3D Design Software: Creating Cable, JB, panel, Pull pit, Duct Bank, sleeve, Conduit, Creation of Cable Ways, Cable way branch volume dimensions, Definition of necessary parameters of cable way: shape, Width, Access Height, Maximum Layers, Max Cables, Maximum Fill (%), Allowable Classes, ...
- Assigning Cables to Cable ways, creating all required Route points in 3D Model (Attachment Point, Cnode, Route Point, Pull Node ...), Dressing Cable Ways, Cable Trench (Under Ground), Cable Tray (Above Ground), Importing real cable length from AVEVA E3D to AVEVA E&I.
- DRAW Module: 2D output from 3D Model.

AVEVA Integration Service

- Using Integration Service to link between all followings:
 - AVEVA Diagrams (can be linked to AVEVA Engineering or AVEVA E&I)
 - AVEVA Engineering (Including E&I Dabacon Version)
 - AVEVA Instrumentation & Electrical (SQL Version)
 - ETAP (Integration and mapping with AVEVA Electrical or AVEVA Engineering)
 - AVEVA E3D Design (AVEVA Catalogue or Design): for Importing cable catalogues from AVEVA E&I to AVEVA Catalogue and Exporting Real Design Cable Length, Cable Routing Status and Cable Routing Nodes from AVEVA E3D Design to AVEVA E&I.