Habibollah Bolour

(Mechanical Eng. (M.Sc.))

Gender: Male	Marital status: Married	Birth Date: 9th August 1982

Bolour.habib@gmail.com
Home: (+98) 21-77819796
Cell: (+98) 912-1874537

Address: Unit 28, No. 2, 3/2 Alley, 2nd St., Daneshjoo Sq., Shahrak-e-Valfajr, Southern Sheikh Bahaei St. 1437813991- Tehran, Iran

HIGHLIGHTS & HONORS

- More than seven years of experience in the field of designing and manufacturing of cost efficient, fully optimized and innovative special equipment and machines
- Comprehensive knowledge in well-known design codes and standards such as ASME, API, DIN, BS, EN, ISO, TEMA and etc.
- Expert in designing of static (fix) equipment in gas, oil, petrochemical, mineral processing and steelmaking industries
- Vast knowledge in designing machinery and material handling equipment in various industries
- Expert in static, transient, linear and non-linear stress analyzes of structures and components
- Good knowledge in material selection
- Good knowledge in welding and NDE procedures and documents
- Excellent abilities in team working, problem solving and public communication and negotiation skills
- Completely familiar with the working procedures and other disciplines' requirements in E.P.C. projects
- Member of mechanical engineers society of Iran since 2000
- Ranked 200th among more than 12000 participants in nationwide M.S. university entrance exam
- Graduated with 1st rank among the master program students
- Received a citation for excellent engineering activities during military service, from honorable commander of Iran Army Aviation

EDUCATION

M.Sc. in Aerospace/Mechanical Engineering (Aero-Structures/Applied Mechanics) 2005 - 2008
- Tarbiyat Modarres University (T.M.U.) - Tehran, Iran
- G.P.A.: 17.46/20

B.Sc. in Mechanical Engineering (Solids Designing) 2000 - 2005
- Science and Research Campus of Tehran-Azad University
- G.P.A.: 16.50/20
- Traineeship place: Jig, Fixtures, Mold and machine tool Designing Department
  Iran Khodro Diesel Company

High School Diploma in Mathematics and Physics 1996 - 2000
- Daneshmand high school-Tehran, Iran
- G.P.A.: 18.77/20

TECHNICAL SKILLS

- **Technical Softwares:** **Modeling:** SOLID WORKS *(Expert in all modules)*
  AUTOCAD *(Expert)*, PDMS *(Familiar)*
  CAE: ANSYS & ABAQUS & LS-DYNA *(Expert)*
  PV-Elite, Tank, AMETank, HTRI, ASPEN EDR, Nozzle Pro *(Expert)*
  SAP2000 *(Very Familiar)*

- **Codes and Standards:** Completely familiar with codes and standards for designing, pressure vessels, storage tanks, S&T heat exchangers, Air Coolers, stacks, structures, machine components, hydraulic and pneumatic circuits, bulk material handling and storage, such as: ASME Sec. VIII, Div 1 & 2; ASME STS-1; API 650, 620, 661; AWWA D-100, DIN 1055 and etc., ASTM, EN, TEMA, BS, ISO and etc.
- **General Software:** Ms DOS, Microsoft Office *(Expert in word, Excel, Power Point and Outlook)*, Adobe Acrobat, Excellent knowledge of computer hardware and software
- **Programming Languages:** BASIC, MATLAB *(Expert)*, MAPLE *(Expert)*

CERTIFICATES

• Product Quality Improvement and Automation in Continous Casting (90 Hrs.) Ramon Science and Technology Co., China	2014
• Advanced Industrial Hydraulics -FESTO Didactic, Iran	2013
• Designing of pressure vessels using PV-Elite package and ASME Sec. VIII, Div. 1 Novin Parsian Institute	2012
• Designing of atmospheric storage tanks using API 650 and Tank software Novin Parsian Institute	2012
• Designing of Shell and Tube Heat Exchangers using HTRI and ASPEN (TEMA and ASME Sec VIII)	2012
• Industrial Hydraulics–FESTO Didactic, Iran	2005
• Industrial Pneumatics–FESTO Didactic, Iran	2005
• CATIA Package – Iran Khodro Diesel Co. (Jig, Fixtures & Machine Tools Design Department), Traineeship course	2004

WORK EXPERIENCES

• **B.I.D.E.C. (IRITEC Group)** **(Current positions):** **1. Head of fixed Equipment design team in machine design department** **2. Machine design dept. coordinator (PSL) in Sangan iron concentration project (EPC)** **Been involved in many EPC projects such as:** **1. <u>Kharg Island Gas Gathering And NGL Recovery (Dorood1, Dorood 2, FGC):</u>** ✓ *Mechanical design of static equipment such as; vessels (Receivers, K.O. drums, Filters, discharge and suction drums, Potable water elevated tanks, Receivers and …* ✓ *Mechanical and thermal design of Shell and Tube heat exchangers (Medium and high pressure comp. after coolers), Air coolers* ✓ *Mechanical design of atmospheric and low pressure storage tanks (API 650, API 620, BS, DIN)* ✓ *Preparing technical and commercial documents such as: MR, TBE and etc*. **2. <u>Karanj 3 Gas Compression and Injection Project:</u>** ✓ *Mechanical Design of high pressure (3900 psi/ 270 barg) suction and knock-out drums, compressor discharge drums according to ASME Section 8 Div. 2* ✓ *Mechanical and thermal design of compressor after coolers (Air coolers) for high pressure (3900 psi/ 240 barg) gas injection system according to ASME Sec. 8 Div. 2* ✓ *Preparing EPC bid documents such as Technical specification mechanical and thermal data sheets, performing preliminary strength calculations and etc.* **3. <u>Sangan Iron Ore beneficiation Project:</u>** ✓ *Analysis and detail designing of all atmospheric slurry distributor tanks (7 types)* ✓ *Analysis and detail designing of rectangular elevated pump hoppers (tanks) (5 types)* ✓ *Detail design of filter press filtrate feed pressure vessel* ✓ *Detail design of all acid storage and daily tanks (Sulfuric, oxalic and etc.)* ✓ *Detail design of floatation tanks* ✓ *Filter feed tanks with agitators*	2011- Present

- ✓ *Detail design of concentration and thickener tanks (including steel structures)*
- ✓ *Not accomplished yet*

4. <u>Sungun Copper Refinery Project:</u>

- ✓ *Detail designing of whole atmospheric high-temperature stainless steel process and storage tank (containing Acids) using API650 & 620 codes such as acid sulfuric storage tank, Slime thickeners and clarifiers and etc.*
- ✓ *Detail design of all pressure vessels and reactors, autoclaves and etc.*
- ✓ *Details design of various special non-circular process tanks*
- ✓ *Preparing technical and commercial documents*
- ✓ *Solving engineering issues of clients.*

5. <u>Sungun Copper Concentration Plant-Phase 2:</u>

- ✓ *Detail designing of all atmospheric tanks (circular and Rectangular) (On ground/Elevated)*
- ✓ *Detail designing of Concentration tanks (including steel structure), Thickeners, Clarifiers, buffer and floatation tanks (circular and rectangular)*
- ✓ *Detail design of reagent storage and mixing tanks*
- ✓ *Designing flow diverters (Slurry/Bulk)*
- ✓ *Designing the twin compartment 200 m^3 buffer bin for sag mill reject line*
- ✓ *Designing Pneumatic and Hydraulic circuits for equipment such as diverters, ball storage gates and etc.*
- ✓ *Preparing technical documents*
- ✓ *Solving engineering problems and participation in technical meetings with client and suppliers*
- ✓ *Solving vendors' technical queries and NCR(s)*
- ✓ *Detail designing of all mills' feed and discharge chutes*

6. <u>Hormozgan Steel Complex (HOSCO) Air Separation Unit Expansion:</u>

- ✓ *Preparing plot plans and equipment layout*
- ✓ *Preliminary mechanical calculations for cryogenic argon, nitrogen and oxygen vessels*
- ✓ *Preparing the material requisitions for cryogenic Nitrogen and Argon vessels*

7. <u>Makran Chabahar HBI Plant:</u>

- ✓ *Basic design of 5240 m^3 day bin for incoming oxide pellets including discharge system*
- ✓ *Basic design of 50 m^3 Remet reclaim hopper and discharge system*
- ✓ *Basic design of 250 m^3 oxide fines bin*
- ✓ *Preparing technical specification for Train & Truck Loading Stations*
- ✓ *Basic design of feed belt conveyor over train and truck loading stations*

8. <u>Ghadir-e-Iranian Direct Reduction Plant:</u>

- ✓ *Analysis and detail designing of 4200 m^3 product storage bin*
- ✓ *Detail designing of upper seal slide gate for product storage bin*
- ✓ *Detail designing of product storage bin discharge gate*

9. <u>Khorasan Steel Making Expansion:</u>

- ✓ *Designing of 250 m^3 CCM Emergency elevated water tank (3 internal concentric tanks experiencing external hydrostatic pressure)*
- ✓ *Designing of stack (5 m dia., 20 m height) for de-dusting bag filter outlet*
- ✓ *Designing of storage and process tanks (Circular & Rectangular)*
- ✓ *Designing of all pressure vessels for: Water treatment plant, Furnace injection vessels and all utilities*
- ✓ *Detail designing of whole FTP (Fume Treatment Plant) equipment including: Tilting elbow (plus tilting mechanism), settling chamber, water cooled ducts, hot ducts, cyclone and natural air cooler, Dust Silo, Chain Conveyors, Screw Conveyors, rotary valves, material handling gates, Calculation of entire fume plant supporting loads;*
- ✓ *Analysis and detail designing of molten steel teeming Ladle and scrap basket*
- ✓ *Analysis and designing of 260 ton EAF shell and scrap basket lifting beams*
- ✓ *Analysis and designing of 350 ton Crane test structure*
- ✓ *Design review of whole EAF and LF hydraulic systems and preparing the purchase enquiry documents*
- ✓ *Design of Electrode make up stand hydraulic and pneumatic clamping system*
- ✓ *Design review of rotating platform (Scrap bucket car turning table) and related hydraulic system*
- ✓ *Preparing calculation booklet for 180 m^3 cold DRI, 60 m^3 ferro-alloy storage bins and holding hoppers including weighing system*
- ✓ *Detail designing of 80t road weighing system*
- ✓ *Detail design of M/H de-dusting system pneumatic, gravitational and manual dampers (including pneumatic circuit design)*
- ✓ *Preparing technical, enquiry and bid documents for equipment and packages*

✓ *Solving client's engineering issues, NCR(s), TQ(s) and etc.* **10. <u>Ghaenat Steel Making Expansion:</u>** ✓ *Been involved in detail designing of all activities mentioned in previous project (Khorasan).* **11. <u>Hormozgan Steel Making Plant:</u>** ✓ *Analysis and reliability review of EAF, LF and empty ladle transfer cars in case of plant capacity expansion* ✓ *Re-design and preparing strengthening instruction for failed 80 ton road vehicles weighing system* **12. <u>Shahid Kharrazi Iron Direct Reduction:</u>** ✓ *Detail designing of furnace discharge gate and optimization of sliding mechanism- Modifications on product and buffer bins' discharge mechanisms* ✓ *Designing of lower furnace slide gate mechanism* **13. <u>Other Responsibilities:</u>** ✓ *Preparing Preliminary calculations, Bid documents, MDR, estimation of engineering man-hour, evaluating the MTO and BOQ and etc. for various EPC projects at tender stage such as:* ➢ *Henkel powder and liquid detergents production complex* ➢ *SOP (Potassium Sulfate) Unit, Uremia Petrochemical Compnay* ➢ *Sangan Iron concentration plant* ➢ *Razi petrochemical complex compressor station* ➢ *Makran mega module direction reduction plant (HDRI)* ➢ *Daralu copper concentration plant* ➢ *Bafgh Kasra Steel complex (Mat. Handling/BF/Convertor/LF/CCM)* ➢ *Ghadir-e-Kerman Steel complex (Mat. Handling/EAF/LF/CCM)* ➢ *Hormozgan steel company (HOSCO) Air Separation Unit expansion* ➢ *Azarbayejan (Miyaneh) Steel complex Fume Treatment Plant*	
• **Self-sufficiency division of Army Aviation (Jahad-e-Khodkafaei) (Military service period)** *Two years of full time scientific and engineering works related to designing and manufacturing special equipment and machines in aviation industry such as helicopter ground carriers, Engine washer, Full motion flight simulators, Immersed and floating fuel storage tanks and etc.*	2009 – 2011
FREELANCE PROJECTS	
• **Bardsir Steel Complex-Sirjan Steel Company-TAM Iran khodro** *Basic design, Mechanical calculation and detail design of "310 m^3 EAF/LF/CCM emergency Cooling water elevated tanks (consisting 3 inner concentric tanks experiencing external hydrostatic pressure)"*	2015
• **Niam Agricultural Products Company** *Basic Design, Detail design, Procurement and construction of a SMC fertilizer production line (4 ton/Hr) consisting: De-dusting system, pneumatic conveying, vibrating screens, weighing and dosing systems, bucket dumpers, belt and screw conveyors, mixing and granulizing drums, dryers and bagging facilities*	2013-Present
• **Azad University – Karaj branch (Civil Engineering Department)** <u>Design and construction</u> *of an apparatus for three axial hydrostatic loading of soil or concrete samples aiming stress-strain analyses which demands high precision design of loading frame, chassis and loading mechanism (Jack screw + Servo motor). All the critical components were analyzed using FEM methods (Ansys) and modeled using Catia package.*	2008 - 2009
• **Tarbiyat Modarres University (Soil & Foundation Lab.)** <u>Design and fabrication</u> *of a high precision laboratory apparatus for preparing saturated soil samples which demands precise linear positioning, velocity and acceleration control mechanism (Ball screw, Linear bearings, Servo motor and controllers). All frames and load carrying parts were analyzed by FEM (Ansys) and modeled and drawn in Catia package.*	2007 - 2008
• **Isatis Engineering Group - (Asia Tabloo Co. project)** *Designing and fabrication of a universal CNC table with two degree of freedom for injecting air seal foams around the industrial and computer racks with various and optional geometrical dimensions. Chain drive and ball screw mechanisms were used for motion in X and Y directions respectively.*	2005 - 2006
• **Deghat Industrial Group** *Reverse engineering of a 7m^3 concrete truck mixer, aiming optimization and reduction in chassis and components failures, cost and manufacturing time. Modeling and detail drawing (Catia), Precise stress analyzing (Ansys) and hydraulic modifications (Automation Studio package) were the performed activities.*	2005

LANGUAGE SKILLS

- Persian — Native
- English — Fluent
- Deutch — Beginner (A2)

MISCELLANEOUS

- Familiar with welding and NDT/NDE procedures and documents such as WPS, PQR and …
- Welding (Familiar)

TEACHING EXPERIENCES

- Tutoring codes and standards related to design of static equipment such as API, ASME Sec. 8, AWWA D100 and etc. in Novin Parsian Institute since 2013, Tehran, Iran
- Tutoring API 650 and Tank software-Azad University, Tehran south branch since 2014
- Teaching F.E.M. and CAD\CAM packages (SOLIDWORKS & ANSYS) since 2005
- Private teaching of junior and last year courses of mechanical engineering such as: Principals of Static and Dynamics, Strength of materials, Machine components design and etc since 2005
- Teaching Strength of materials, CAD/CAE 2 and Technical English-Kar University-Qazvin (2011-2012)

FIELDS OF INTEREST

- Oil, gas and petroleum industries
- Fracture mechanics
- Special machines' design
- Energy optimization
- Bulk material storage and handling

LEISURE ACTIVITIES

- Watching movies and reading
- Camping
- Sports (Cycling, Ping pong)
- Learning new languages