

Industrial Background

□ ***During the High School, 3 years:***

Summer work experience in the family automotive machine shop. It was my first experience to do some general mechanics and to get into direct contacts with machines.

□ ***During studying for Bachelor of Engineering., 5 years:***

Lab instructions and programs for summer practice through which I had visited many factories and manufacturing facilities.

□ ***Maintenance Engineer, 3 years:***

It was my first responsibility as a mechanical engineer. I had the following job duties:

- Planning and supervision of vehicles maintenance and overall repair.
- Supervising the quality control and inspection methods applied.
- Managing the spare parts and maintenance requirements stocking.

□ ***Technical Office and Training Manager, 5 years:***

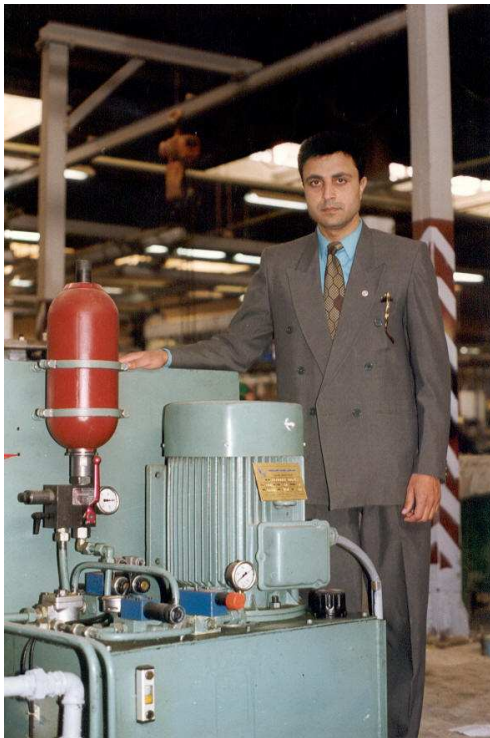
This job represents a turning point of my industrial background. It was a good opportunities to implement my academic background in engineering design. I encountered many challenges successfully during this job. The industrial-related duties were as follows.

- Design of hydraulic power units according to customer requirements. (I designed 45 different units of powers ranging from 1 kW to 45 kW). I was personally responsible for circuit design, component sizing and selection, static and dynamic analysis, system efficiency, power distribution, heat balance, flow and pressure distribution charts, electrical and logic control and cost evaluation.
- Supervising the assembly process at the machine shop.
- On site commissioning, testing, troubleshooting replacement and renovations.





Computer monitoring of hydraulic power pack working condition



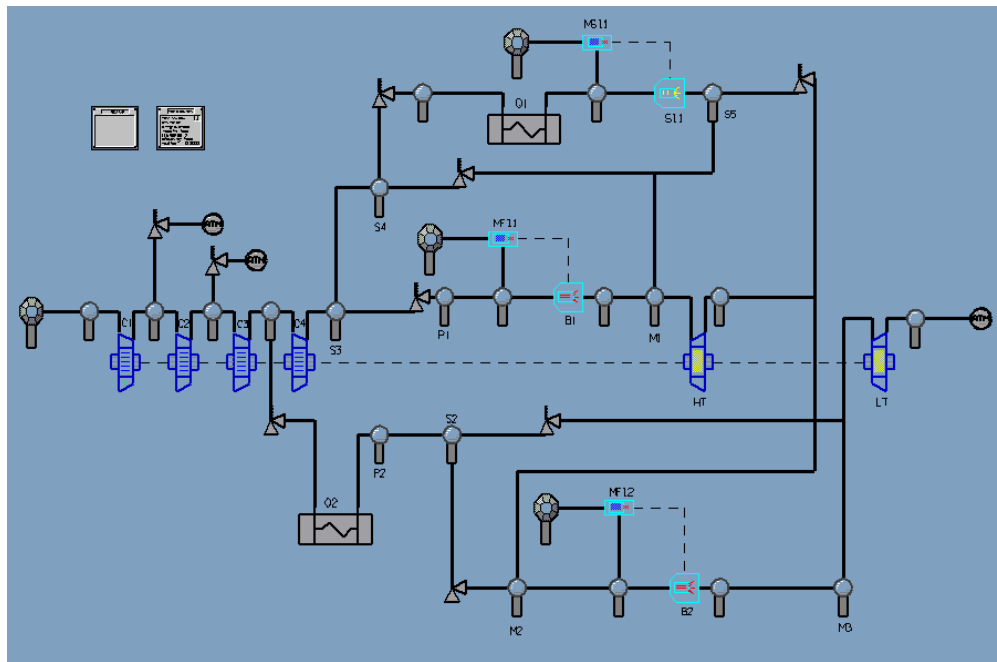
Computer controlled hydraulic system for fatigue testing of truck rear axles under different loading conditions

□ **Power Plants Simulation Software Developer , 2 years:**

I've worked as a software developer for CAE Inc., Montreal, Canada. I was responsible for developing, testing and integrating comprehensive mathematical models of Combined Cycles Gas Turbines and Fluid Power control systems and components. The developed models are used as reference models in power plants full-scale simulators and real-time control systems.

Examples of the developed models are as follows: Turbine, compressors, steam injectors, fuel injectors, combustion chambers, positive displacement pumps (fixed and variables), hydraulic control valves (pressure, directional and flow), hydraulic actuators (cylinders and motors) and accumulators.

Examples of the developed systems: Combined Cycle Gas Turbine (CCGT) for power generation, CCGT as Gas Compressor, Hydraulic oil system for controlling group of valves of CCGT, Hydraulic oil system for position and speed controlling of linear actuators.



Combined Cycle Gas Turbine (CCGT) for power generation