**OVERVIEW**

- **PASSAGE®/SYSFLOW** software is a one-dimensional System Flow and Heat Transfer Analysis program for the prediction of flow network performance.
- **PASSAGE®/SYSFLOW** software is fast, user-friendly and effectively predicts performance in a variety of user-defined networks.
- Steady, compressible and incompressible flow problems can be solved including heat transfer effects.
- Virtually any flow network system and/or sub-system can be modeled using combinations of components included in the standard library.

**APPLICATIONS**

- Automotive
- HVAC
- Gas Turbine Secondary Flow Systems
- Electric Motor Flow and Cooling
- Process Lines
- Appliances
- Utilities
• PASSAGE® software is a collection of finite element programs for flow, heat transfer and related analyses in 3-D geometries.
• PASSAGE® software consists of the following stand-alone programs:
  • PASSAGE®/FLOW flow and heat transfer analysis.
  • PASSAGE®/DUCT flow through complex passages. blade passages.
  • PASSAGE®/PowerCAST casting processes.
  • PASSAGE®/SYSFLOW one-dimensional simulation of flow networks.
  • PASSAGE®/FreezeDrying primary and secondary freeze-drying modeling using coupled mass and heat transfer analyses.
  • PASSAGE®/COMPRESSION compression molding analysis of thin-walled plastic parts.
• All programs are supported by pre-processors for geometry, mesh, flow/process conditions definition; and post-processors for color results display as x-y graphs, vector and contour plots.
• Application areas are widespread in automotive, fan/ HVAC, appliance, aerospace, equipment and pharmaceutical /chemical/food industries.

• An X-Windows based graphical User Interface provides a user-friendly environment to build networks by interactively adding various components.
• Existing components and their associated properties can be modified, deleted and moved easily to change the network characteristics or to build new networks from existing ones.
• The Post-Processor is a powerful graphical tool for the result interpretation of pressure, velocity, temperature and density.
• Components:
  • Sources - fixed pressure or flows, pumps, fans
  • Pipes - different geometries
  • Fittings - contractions, expansions, bends, & junctions
  • Valves - proportional, relief
  • Heat Exchangers
  • Filters
• PASSAGE®/SYSFLOW software runs on PC based workstations.

• PASSAGE®/SYSFLOW software can minimize the cost and time of traditional prototype building and testing, thus shortening product design cycles.
• Designs can be analyzed and modified many times to evaluate flow losses on the computer before expensive and time consuming design decisions are finalized.
• Technalysis offers software customization services whereby PASSAGE®/SYSFLOW software can be integrated with other software or customized to fit unique customer specifications.