

## USER INTERFACE DEVELOPMENT

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**Current Status**

User interface complete for the OS/2 version of the following components:

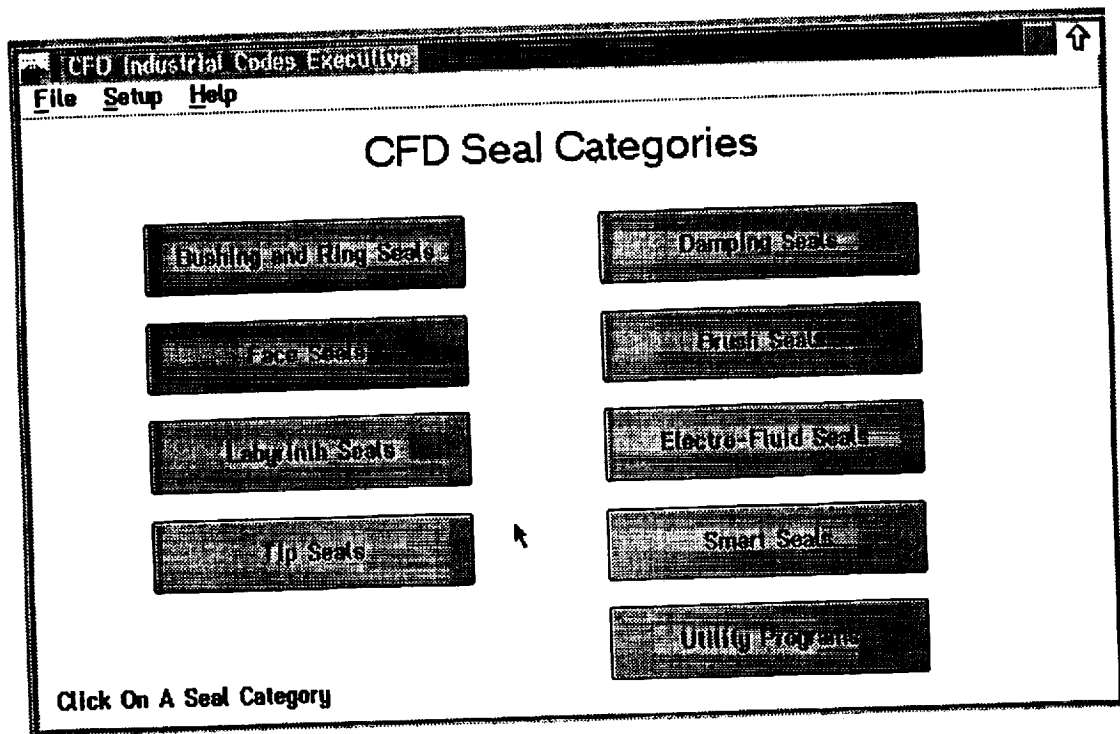
- Executive Shell
- Spiral Groove Gas Cylindrical Seals (SPIRALGC)
- Spiral Groove Gas Face Seals (SPIRALGF)
- Spiral Groove Face Seal Optimization (FACE)
- Gas Cylindrical Seals (GCYL)
- Gas Face Seals (GFACE)
- Incompressible Cylindrical Seals (ICYL)
- Incompressible Face Seals (IFACE)
- Fluid Properties Calculation (FLUID)
- Plotting Program for GCYL, GFACE, ICYL, and IFACE.
- Cylindrical Seals Configurations for SCISEAL

**New Features**

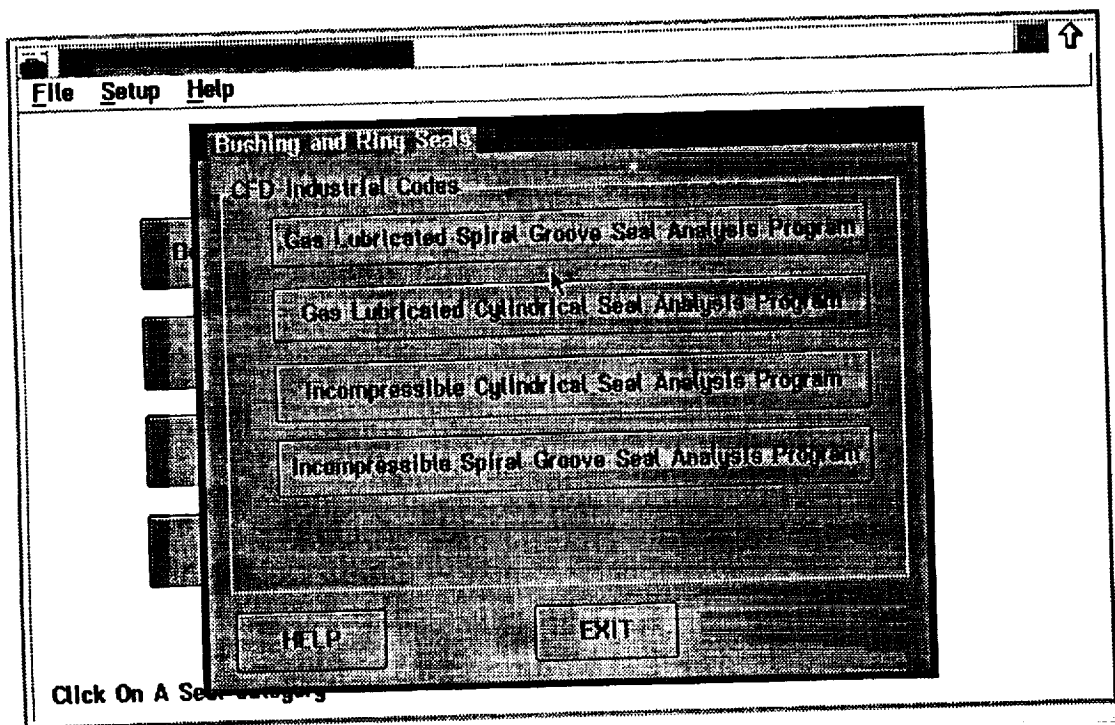
Features added since the last workshop based on user feedback:

- Units conversion between SI and English units from the **Analysis Options** menu item
- A **Set Defaults** menu option to set all input values to program defaults
- A **Batch Mode** option in the **Analysis** menu to run multiple test cases
- Automatic handling of data files from a previous test case
- Deletion of Input and Output files from the **File** menu in the **Executive**
- All analysis codes built using a 32-bit FORTRAN compiler for OS/2. Codes run at least twice as fast as the previous versions. Users must have OS/2 2.0 or later versions.
- New, easy to use installation program
- Several internal enhancements to improve performance and reduce development time

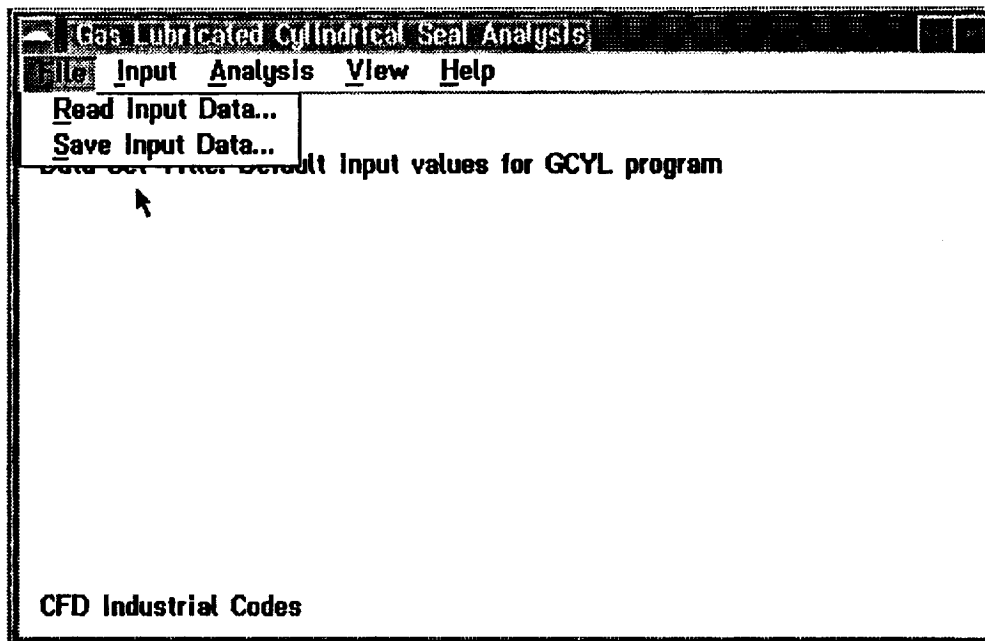
## System Executive



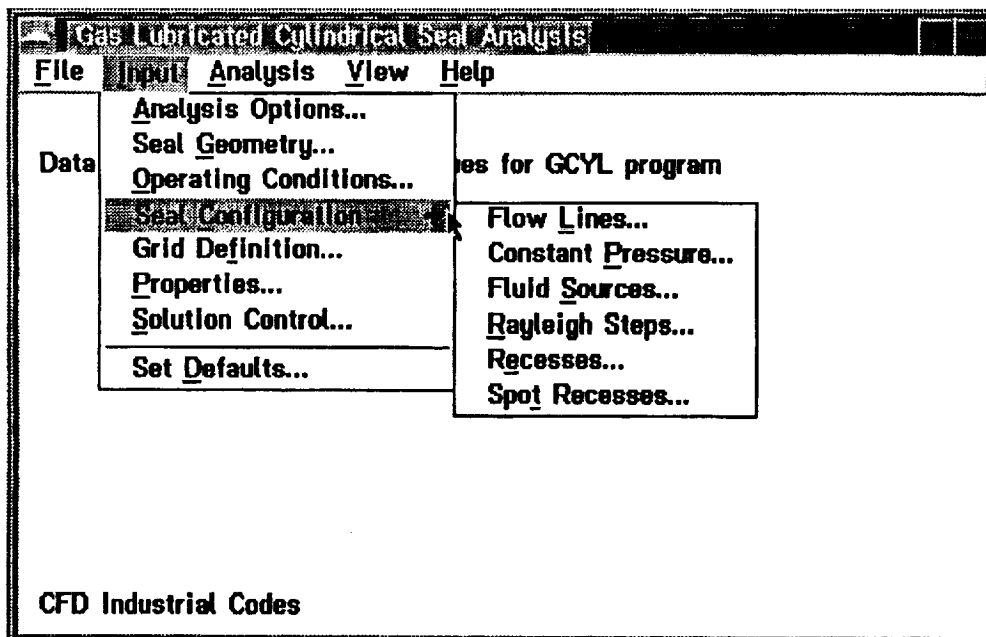
## Bushing and Ring Seal Codes

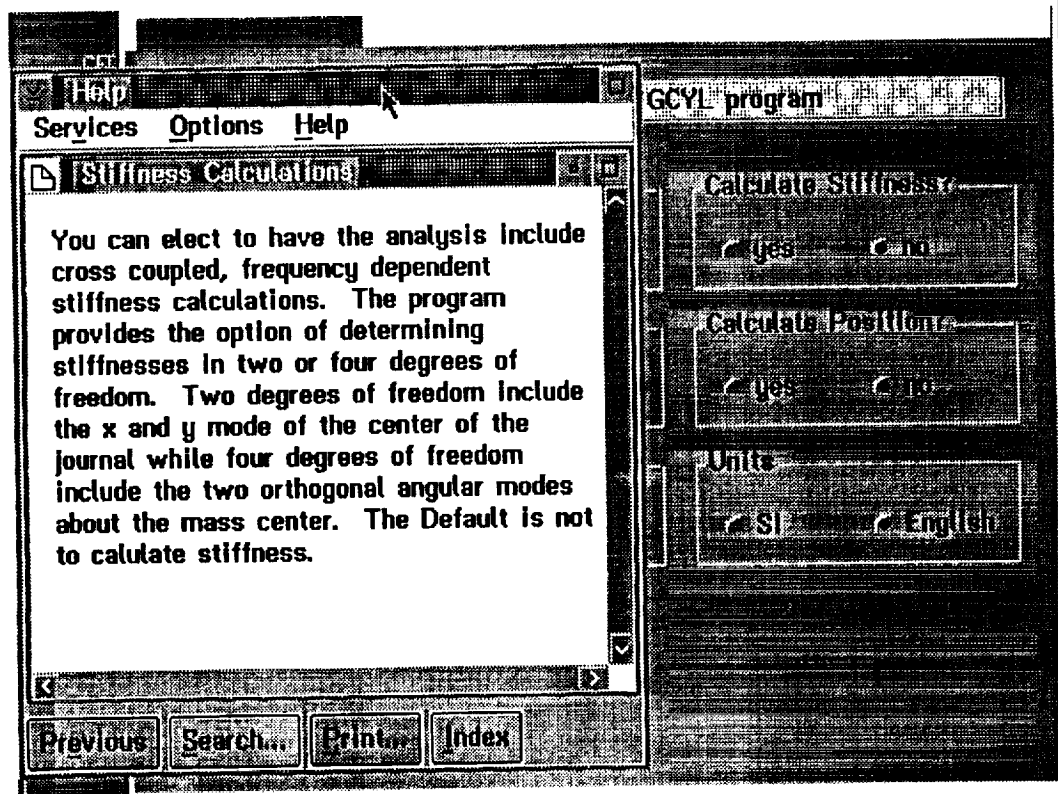
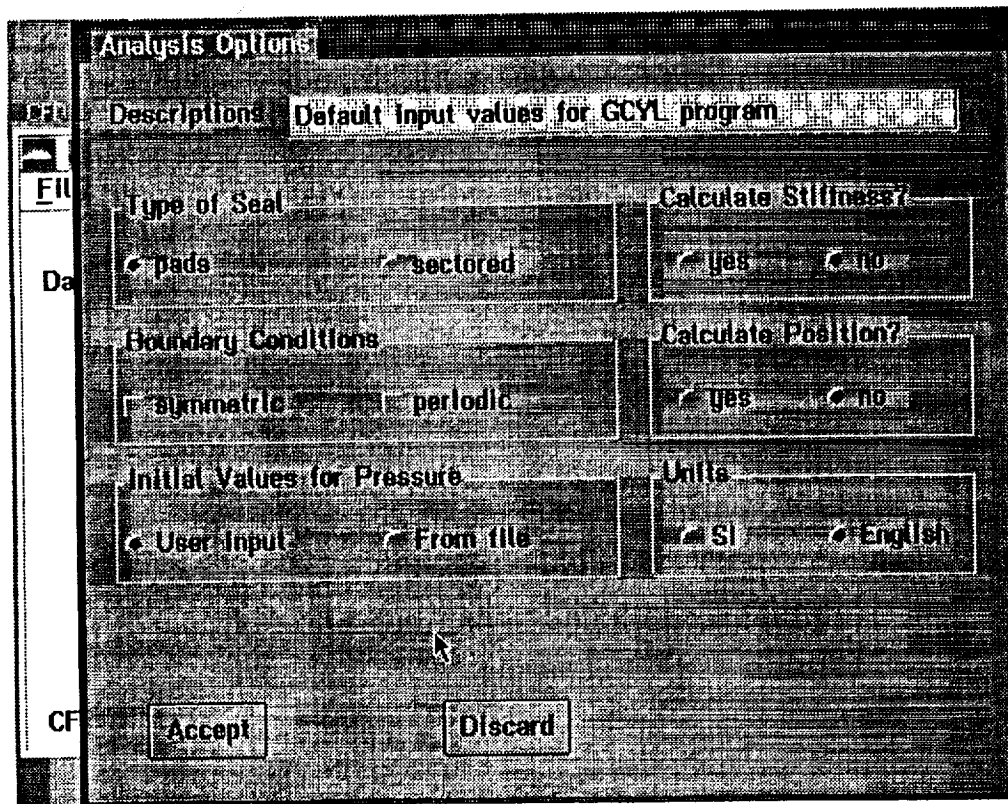


## Using an Industrial Code: FILE menu



## Using an Industrial Code: INPUT menu





**Seal Geometry**

1.00000 Seal Length - in

1.00000 Seal Diameter - in

0.00100000 Seal Clearance - in

1 Number of Sectors 0.000000 Starting Angle - deg

0.000000 Sector Pressure for each Sector - psia

0.000000 Projected Area for each Sector - in<sup>2</sup>

1 Number Pads

0.000000 Start of First Pad Region - deg

10.0000 End of First Pad Region - deg

0.000000 Taper Angle - deg 1 Axial Node Number

Accept Discard

### Using an Industrial Code: Array Input

**Flow Lines**

File In Data Set

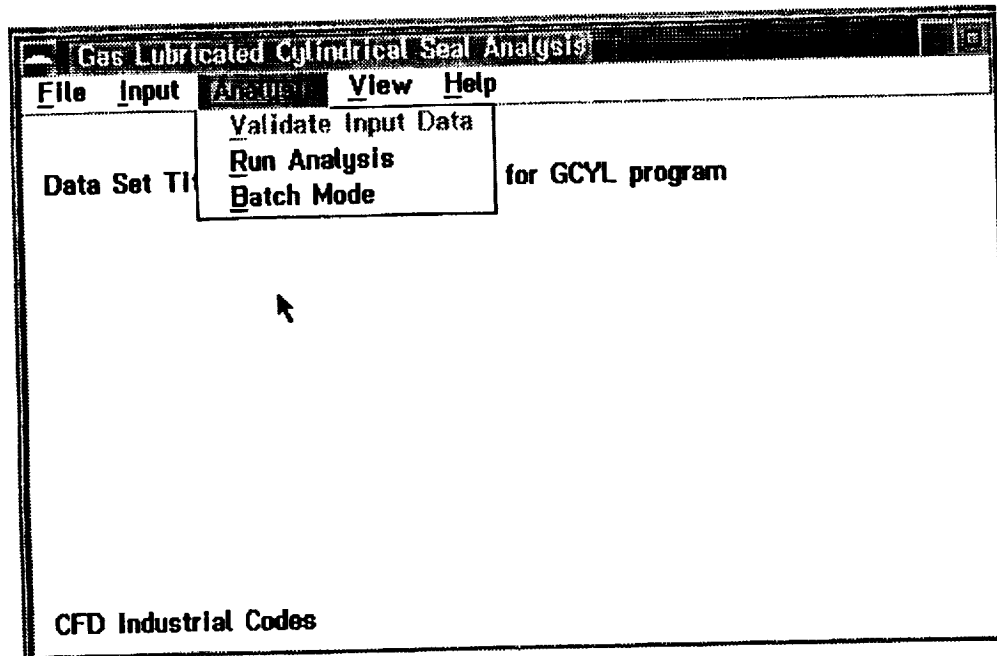
Number Flow Lines 6

|   | X1 | X2 | Y1 | Y2 |
|---|----|----|----|----|
| 1 | 1  | 1  | 1  | 1  |
| 2 | 1  | 1  | 1  | 1  |
| 3 | 1  | 1  | 1  | 1  |
| 4 | 1  | 1  | 1  | 1  |

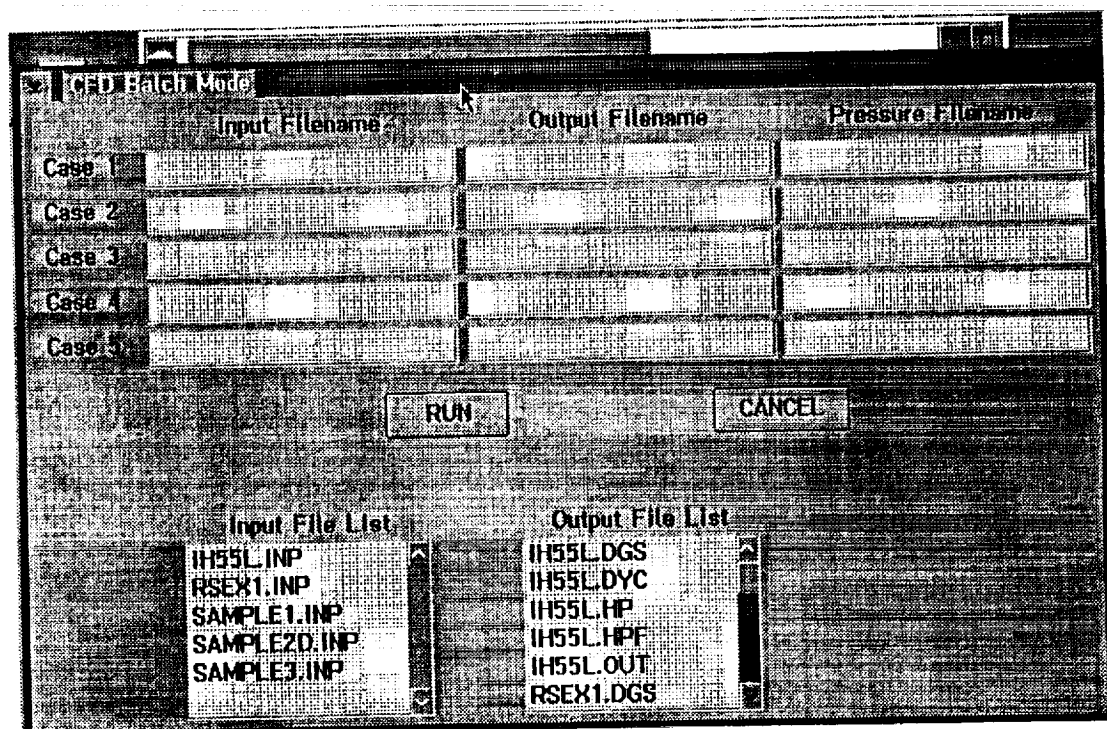
Accept Discard

CFD Industrial Codes

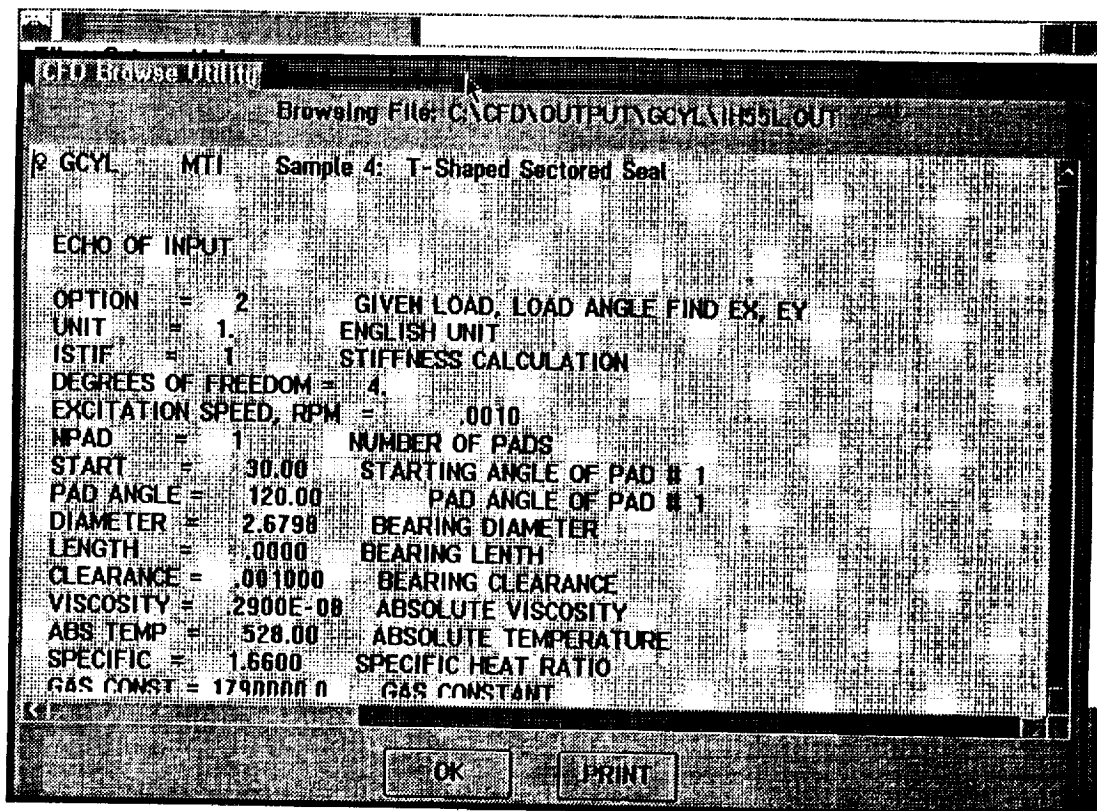
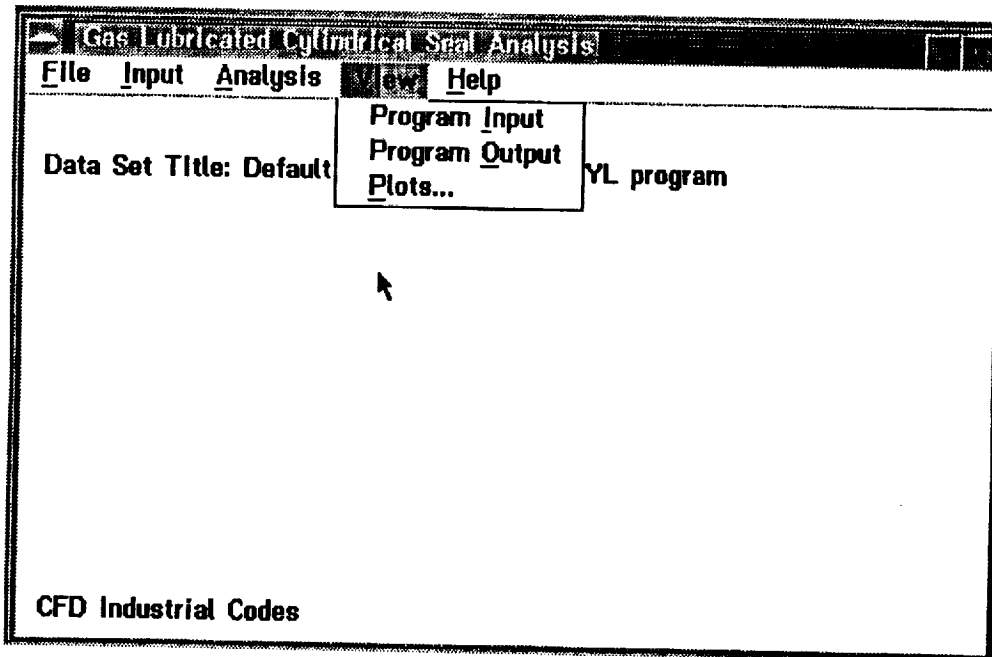
## Using an Industrial Code: Analysis menu



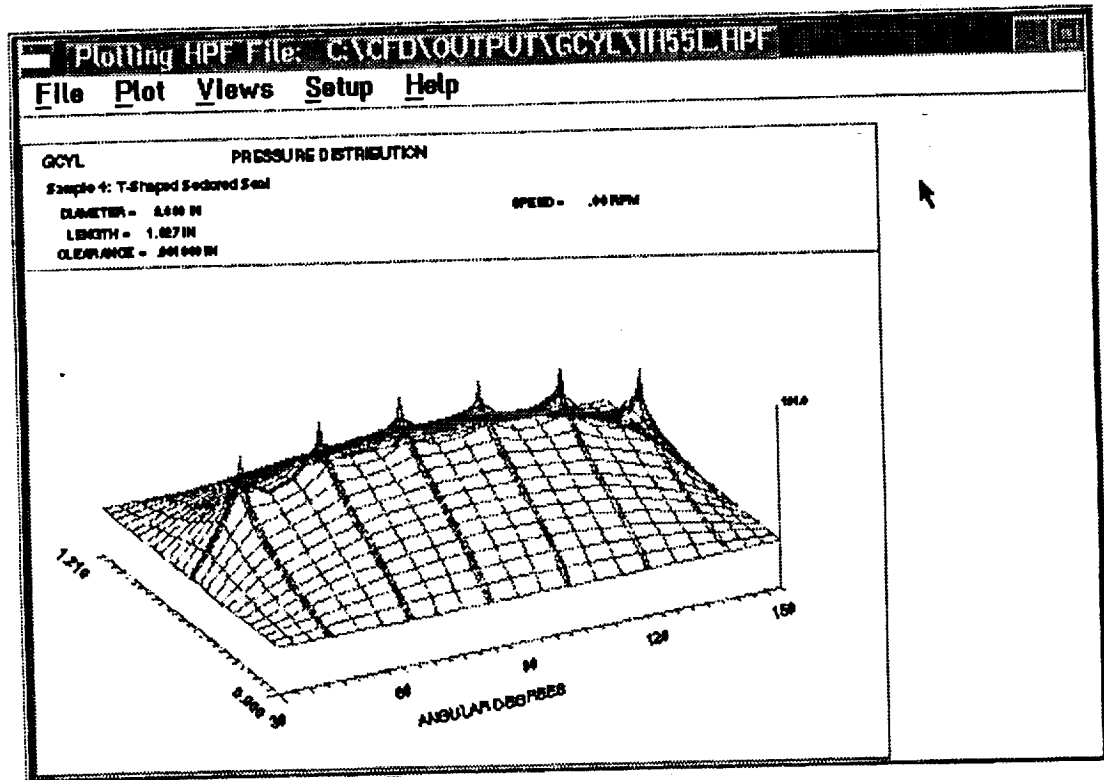
## Using an Industrial Code: Batch Mode



# Using an Industrial Code: VIEW menu







### Work in Progress - Future Plans

New components to be added to the system:

- Labyrinth Seal Analysis (KTK) from the Air Force. Work about 70% complete.
- Seal Dynamics Code (Face and Cylindrical Seals)
- Expert systems
- Enhancement of SPIRALI to include loss coefficients for spiral grooves

Operating System Considerations:

- Problems with conversion of user interface code to Unix
- Distributed Computing Environment (DCE) makes it possible to run programs on an OS/2 machine from a Unix workstation
- OS/2 to be available for Power PC RISC machines in April-May 1994.
- Ability to run both Unix and OS/2 on the same machine at the same time on systems based on OSF Mach 3 kernel