

**PACKAGE ID** - 000596IBMMF00 APEX

**KWIC TITLE** - AutoPIPE Extract Program

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**LIMITATION CODE** -COPY                   **AUDIENCE CODE** - LIM

**COMPLETION DATE** - 07/01/1992   **PUBLICATION DATE** - 07/01/1992

**DESCRIPTION** - The AutoPIPE Extract Program (APEX) provides an interface between CADAM (Computer Aided Design and Manufacturing) Release 21 drafting software and the AutoPIPE, Version 4.4, piping analysis program. APEX produces the AutoPIPE batch input file that corresponds to the piping shown in a CADAM model. The card image file contains header cards, material cards, and pipe cross section cards as well as tee, bend, valve, and flange cards. Node numbers are automatically generated. APEX processes straight pipe, branch lines and ring geometries.

**PACKAGE CONTENTS** - Media Directory; Software Abstract; Informal Documentation; Media Includes Source Code, Executable Module;

**SOURCE CODE INCLUDED?** - Yes

**MEDIA QUANTITY** - 1 3.5 Diskette

**METHOD OF SOLUTION** - Reading the CADAM model, APEX extracts the 3-D elements of a user-requested pipeline. The program orders the elements as required by AutoPIPE, then creates an AutoPIPE batch file. Node numbers, pipe cross sections, and stress intensification cards (TEE, BEND, VALV, and FLA cards) are generated as required. The resulting card image file is converted to an AutoPIPE piping model using the AutoPIPE batch input utility, APIN.

**COMPUTER** - IBM MAINFRAMES

**OPERATING SYSTEMS** - MVS/SP or MVS/XA

**PROGRAMMING LANGUAGES** - VS FORTRAN

**SOFTWARE LIMITATIONS** - Piping in the CADAM model must be represented by means of CADAM 3-D piping elements, grouped into named pipelines. An extracted pipeline is limited to 1000 elements and 20 20 pipe cross sections. Valves, tees, elbows and other fitting are taken from standard CADAM symbol libraries. AutoPIPE defaults are used for material properties and pipe cross section properties.

**SOURCE CODE AVAILABLE (Y/N)** - Y

**UNIQUE FEATURES** - APEX executes in batch so that the user need not know how to use CADAM nor have access to a CADAM terminal in order to

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**UNIQUE FEATURES - (CONT)** create an AutoPIPE input file.

**RELATED SOFTWARE** - CADAM Release 21, CADAM AEC 3-D Piping, CADAM Access Interactive User Exit (IUE), Mainframe to PC file transfer software.

**OTHER PROG/OPER SYS INFO** - The system requires installation of the following CADAM packages: AEC 3-D Piping, IUE. Source code does not conform to FORTRAN 77 standard. Written for IBM VS FORTRAN under MVS/SP or MVS/XA.

**HARDWARE REQS** - Hardware as required for CADAM Release 21.

**REFERENCES** - Using Apex, brief user instructions.

**ABSTRACT STATUS** - Submitted July 1993. Released AS-IS September 16, 1993.

**SUBJECT CLASS CODE** - TL

**KEYWORDS** -

COMPUTER PROGRAM DOCUMENTATION  
A CODES  
PIPES  
EQUIPMENT INTERFACES  
PIPELINES  
STRESS ANALYSIS

**EDB SUBJECT CATEGORIES** -  
990200 420200

**SPONSOR** - DOE/ER

**PACKAGE TYPE** - AS - IS