

PACKAGE ID - 000571IBMPC00 MOTORDATVER2.0

KWIC TITLE - Motor Current Data Collection System

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

COMPLETION DATE - 12/01/1992 **PUBLICATION DATE** - 12/01/1992

DESCRIPTION - The Motor Current Data Collection System (MCDCS) uses IBM compatible PCs to collect, process, and store Motor Current Signature information.

PACKAGE CONTENTS - Media Directory; Software Abstract; Y/IA-283; Media Includes Executables, Control Data;

SOURCE CODE INCLUDED? - No

MEDIA QUANTITY - 1 5.25 Diskette

METHOD OF SOLUTION - The MCDCS utilizes one PC as a controller/data storage unit and one or more PCs as slave data collection devices. Additionally, one PC may operate as both controller/data storage unit and data collection device. The slave unit uses special interface hardware to select a channel to monitor on command from the controller unit, collect sample data from the selected channel, process the sample using Fast Fourier Transform (FFT), and transmit the FFT data back to the controller PC. Gain selection is controlled by the slave unit to provide sample data with optimum signal to noise ratio. The controller/data storage unit sends channel selection commands to slave units, receives FFT data from slave units, normalizes data, offsets frequency and amplitude values, and stores the processed FFT in an existing Computational Data Systems (CSI) database or ASCII file as text data.

COMPUTER - IBM PC

OPERATING SYSTEMS - DOS 3.3 or later

PROGRAMMING LANGUAGES - C, with in-line Assembly Code (10%)

SOFTWARE LIMITATIONS - Requires unique hardware to be functional system.

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SOFTWARE LIMITATIONS - (CONT)

SOURCE CODE AVAILABLE (Y/N) - N

UNIQUE FEATURES - The MDCS software in combination with the associated hardware implements a novel method for extracting periodic abnormalities (machine vibrations) from a periodic carrier wave (60 Hz line current). A patent for this method has been applied for (ESID 784Y).

RELATED SOFTWARE - CSI MASTERTREND vibration analysis software.

HARDWARE REQS - IBM compatible PCs; Custom interface boards (Ref: ESID 784Y); RS232 communications link between Master/Slave units; Microsoft C compiler.

REFERENCES - S.L. Bunch, D.J. Linehan, and C.T. Lyster, Motor Current Data Collection System Source Code, Version 2.0, Y/IA-283, December 1992.

ABSTRACT STATUS - Submitted March 1993. Successfully screened by ESTSC April 1993.

SUBJECT CLASS CODE - T

KEYWORDS -

COMPUTER PROGRAM DOCUMENTATION
M CODES
MOTORS
DATA BASE MANAGEMENT

EDB SUBJECT CATEGORIES -

990200 420200

SPONSOR - DOE/ER

PACKAGE TYPE - SCREENED