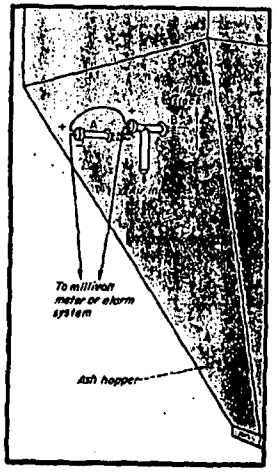
 (Continued from page 110)

AUXILIARY MAINTENANCE FROM ___ TO ___	TO BE CHECKED	DATE CHECKED	WORK ACCOMPLISHED: Checked	Cleaned	Drained	Oil Level	Renew Oil	Lubricate	Stop Leaks	Tighten Conn.	Ck. Contacts	Water Level	Refilled	Replaced	Tightened	Inspected	Chk. With Air	Max. Temp.	Pressure	Calibrate	Ck. Operation	Overhaul	FOUND: Satisfactory	Fair	See Remark	OPERATOR
Air Compressor #1																										
Motor																										
Motor Switch																										
Gas Engine																										
Filter																										
Relief Valve																										
Air Compressor #2																										
Motor																										
Motor Switch																										
Filter																										
Relief Valve																										
Air Reduct. Valve																										
Relief Valve																										
Battery																										
Water Level																										
Charger																										
Readings																										
Emergency Lights																										
Fuel Unloading																										
Pump																										
Motor																										
Switch																										
Strainer																										

THERMOCOUPLES DETECT HIGH ASH LEVEL IN CLOSED PRECIPITATOR HOPPER

REMOTE INDICATIONS of high ash level in hoppers can be easily obtained by arranging two I-C thermocouples, as shown in the sketch below. The couples, *A* and *B*, are installed side by side and connected in series with opposing polarities. The two leads can then be connected to a millivolt meter or a suitable alarm circuit.



Couple *A* inserted through a sealed pipe is exposed to the flue gas and ash temperature in the hopper. Couple *B*, inserted through a pipe with openings both to the atmosphere and the hopper interior, registers the lower temperature of the air drawn in through the pipe by the negative hopper draft. The differing temperatures set up a differential potential in the thermocouple circuit.

When ash level in the hopper rises above the inner opening of pipe *B* the air circulation stops and temperature of couple *B* rises to that of couple *A*. This action reduces differential emf in the circuit to zero, which can be made to sound an alarm. The operating point of the circuit occurring at zero potential has the additional advantage of sounding a warning if an accidental open circuit develops.

G HOLUBECK *St. Louis, Mo.*

Log Sheets Enable Quick Record Keeping

WHILE MOST OPERATORS are efficient in performing their duties, and keep equipment well maintained, they strongly dislike preparing detailed reports of the maintenance work done. To ease the performance of the latter chore, log sheets were devised that give complete information on the work done, and require the operator to do little more than make a few check markes, enter date on which a maintenance or inspection job was done, and his initials.

The table, left, is part of one of the sheets for auxiliaries in a diesel plant. Every piece of equipment that needs inspection and attention is listed on these logs, which acts as a convenient check against accidental oversight. Similar sheets are prepared for the engines with appropriate headings under work accomplished.

The sheets are printed on one side only and assembled in a loose-leaf binder. With this arrangement the blank sides can be used for remarks.

DEXTER M SMITH *Hampton, Iowa*

CONTRIBUTIONS INVITED

POWER pays $20 for each item published in "Power Engineers' Notebook." Here's your opportunity to cash in on those professional tricks you have successfully used in the past, and also help your fellow power engineers. Your manuscript need only be in rough form, giving all facts and the sketches in pencil. We will dress them up for publication.

This department covers power problems in design, operation and maintenance ranging over items that are: mechanical, electrical, hydraulic, structural, or of any nature concerning power generation and services.

CORRECTION

E J Kates, contributor of original data for item on "Using Available Voltages Increases Speed Range," on p 110, Jan, 1948, POWER, points out that the lowest speed should be 425 instead of 520 rpm as published. This gives a total speed range of 4 to 1.