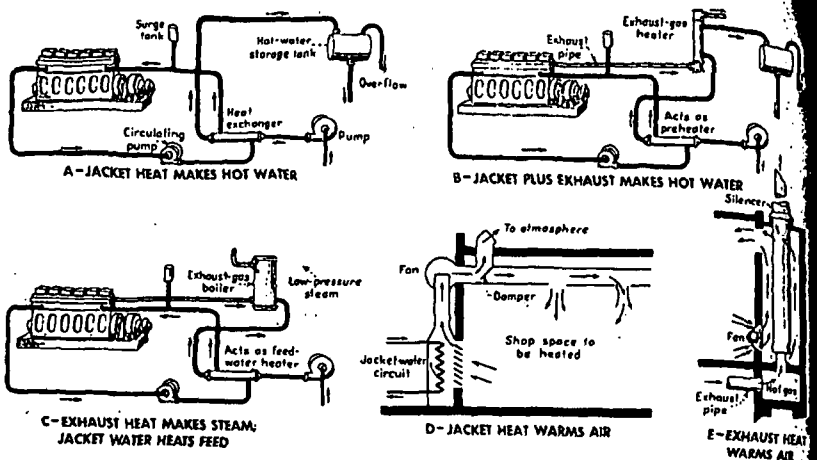
TYPICAL METHODS OF RECOVERING DIESEL HEAT



available for other work. How much depends on nature of load, convenience and accessibility of plant and amount of engine maintenance to be handled by operator.

Amount of maintenance depends on engine design, nature of service and methods of operation. In general, total maintenance costs will be less where systematic procedures are followed. Analysis of the *Report* on *Oil Engine Power Cost*, over a period of years, indicates that a reserve of 1 to 2 mills per kwhr will cover maintenance and supplies for the average plant.

Investment. Cost of a complete diesel plant, exclusive of buildings, varies with number of engines, kind of cooling system and other design features, but may be taken as ranging from $120 to $240 per kw. Large plants generally show lowest unit costs. Addition of buildings, or alterations to existing structures, bring these figures up to about $150 to $275 per kw.

Diesels have proved themselves in a wide variety of applications. For generation of electric power, in municipally or privately owned central stations, or in isolated plants, they generally show economic advantages where total plant capacity is of the order of 15,000 kw or less.

Industrial applications are numerous. A large number of diesels drive industrial machinery directly — cotton gins, flour mills, refrigeration compressors for ice-making, cold-storage and air conditioning, pumps, pipeline compressors, etc. Here simplicity of installation and compactness enters the picture as well as purely economic considerations.

The diesel proves highly suited to standby and emergency power applications. Quick-starting and freedom from standby costs, simplicity of installation and compactness are advantageous in such cases and the non-hazardous nature of the fuel is often important.

Heat Recovery. Power-generation in industry frequently requires production of process heat. This presents an opportunity to recover much of the 65% of fuel energy that is unavoidably lost. Diagrams above show typical methods of heat recovery, of which there are many. High efficiency of diesels should not cause prospective users to overlook the substantial opportunities heat-recovery offers to make diesels even more efficient and useful in industry.

ACKNOWLEDGMENTS

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James H McGraw

1860-1948

James H McGraw, founder of the McGraw-Hill Publishing Company, died February 21 in San Francisco. Born in Panama, Chatauqua County, New York, he was 87 years old

[redacted]



FOR HALF CENTURY, from the beginning of James H McGraw's business career to his retirement as chairman of the McGraw-Hill board of directors, saw industrial publishing come of age. His dissatisfaction with the "paste pot and shears" journalism of the early days and his lifelong adherence to the philosophy of editorial leadership had much to do with this development.

Starting life as a teacher, Mr McGraw in 1884 left his principal's desk in a district school to sell subscriptions for *American Journal of Railway Appliances, Street Railway Journal*, and a new little magazine called *Steam*, which became Power that same year. Two years later, for the hard-won sum of $2500, he bought an interest in the struggling young company that had given him his start. Thus the teacher began his career in publishing, and as a publisher became once more a teacher, with the whole world of industry for a school room.

Characteristically, when his associates failed to see that the advent of electric traction doomed the horsecar, he stood firm for his principle of editorial leadership. The company broke up and he established his own house. He took with him *Street Railway Journal*, which acquired an electrical editor immediately. By 1901 Mr McGraw was publishing *Electrical World*; later he acquired *Engineering Record* (now *Engineering News-Record*), *Chemical and Metallurgical Engineering* (now *Chemical Engineering*), and similar papers.

Meanwhile John A Hill, who had left an engine throttle in the Far West to write for a locomotive paper, was building his own industrial publications. He purchased Power in 1902. In 1909 the book departments of the two companies consolidated as McGraw-Hill Book Co.

In 1916, shortly after the death of Mr Hill, the McGraw-Hill Publishing Co was formed and acquired the Hill publications. The new firm began with nine magazines.

From these beginnings James H McGraw built an organization now publishing 34 scientific, engineering, industrial and business magazines. He built it on these principles:

"The purpose of the modern business publication may be described thus:

1. To collect and disseminate experience of those engaged in a certain industry, profession or trade.
2. To act as interpreter of events and developments.
3. To serve as a leader of sound thought and policy.

"All of these functions are important, but that which distinguishes a great paper from an ordinary one is the extent of the leadership it exercises."

Mr McGraw fought all his life for high standards of ethics in publishing. He demanded *truth in advertising*. He and John Hill introduced sound circulation practices by being the first publishers to print in their magazines the total circulation figures.

In the organization James H McGraw built there was no room for the ivory-tower editor. He insisted that editors *maintain* constant contact with the fields of their publications, that they actively participate in the affairs of their industries. "The good editor," he said, "wears out the soles of his shoes rather than the seat of his pants."

Mr McGraw received many awards and honorary degrees. He himself endowed the James H McGraw Annual Award "to encourage constructive thinking for the advancement of the electrical industry."

On June 8, 1887, James H McGraw married Mildred F Whittlesey. They had *four sons*: James H Jr, now president and chairman of the board of McGraw-Hill, Harold W, vice-president in charge of McGraw-Hill building; Curtis W, senior vice-president and treasurer; and Donald C, vice-president in charge of manufacturing. They also had a daughter, Catherine, now Mrs John E Osmun of Madison, N. J.

James H McGraw, someone said, had "a remarkably high standard of dissatisfaction." That has a negative sound. But it was the reflection of an intense will to improve—to improve *business publishing, to improve* his own papers, to improve the industries they serve. It was his great gift to be able to communicate this will to his associates and through them to those of us not fortunate enough to know him personally and work with him during his active career.