

superchargers, roller bearings or whatever. Each locomotive and diesel engine was assembled on and around the basic parts cast, forged, machined, welded by Baldwin at Eddystone, by Whitcomb at Rochelle, by Austin-Western at Aurora, by Hamilton at Hamilton, or by Sterling at Buffalo. The various types of data at Honey Brook provided the "as built" record for each one of the thousands of locomotives and engines constructed starting in the late 1890's!

More than this basic, essential information was preserved by the Baldwin-Hamilton Company because its President, Henry A. Rentschler, spent his entire business career associated with several of the companies whose records were extant at the end of the B-L-H Corporation. He realized the historical potential of these records to document American industry as well as the monetary potential of in-kind charitable contributions. Thus in 1975 Rentschler started to place some older records -- especially those for steam locomotives -- that were not needed for the renewal parts business with not-for-profit, educational historical agencies and museums including the Smithsonian Institution. With the Baldwin-Hamilton Company slated to go out of business August 31, 1991, the present appraisal project was planned by Rentschler as the final effort to distribute these records to responsible historical agencies that had already participated in previous gifts of historical materials. Because the Baldwin Locomotive Works was located in Philadelphia, the Pennsylvania Historical and Museum Commission with its Pennsylvania Railroad museum was interested in 1975 and again in 1991 in preserving the record of one of the

state's most important, but certainly the most famous, manufacturer. From Mr. Rentschler's point of view this gift of the remaining BLW/BLH completes the record by adding electric and diesel electric locomotive data to the steam locomotive materials given to the Pennsylvania Historical and Museum Commission starting in 1975.

Appraisal Methodology

This appraisal for the most part is based on the concept of "fair market value." The official definition for tax purposes is "the price at which such property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell, and both having reasonable knowledge of relevant facts... All relevant facts and elements of value as of the time of the gift shall be considered...." Treas. Reg. Sect.25.2512-1(1958). Beyond my own personal knowledge of such sales I have searched out benchmarks for sales of similar materials. Thus I have turned to dealers and dealers' catalogs of "railroadiana", to auction records, to knowledgeable curators in the fields who have been collecting similar material by gift and purchase. I have tried to assess the potential market in the number of fan clubs, reestablished historic railroads, and rail enthusiasts in general. The Baldwin-Hamilton Company created a file on these latter groups based on the restoration and maintenance of actual locomotives. In its December, 1991, issue Trains Magazine listed the names and addresses of 71 local and regional railroad historical and/or technical societies and of ten

general, national organizations.

The "Buff" Market

I learned early in my quest of the "market" for railroadiana that there has grown up a vast arena of sales activity for which there is practically no residual documentation at all. This ephemeral market is made up of the totality of "railroad shows". One organizer of these events, Greenberg Shows of Sykesville, Maryland, puts on "Greenberg's Great Train, Dollhouse, and Toy Shows" regularly on the Eastern seaboard. The company has advertised five shows from New Jersey to Florida in January, 1991, alone.

Many other railroad shows take place throughout the United States on weekends all year round and like Greenberg advertise in the railroad fan magazines. There are displays and events like model railroads but the core and main attraction of these shows is the "table." The show organizer rents tables to people who want to sell railroad and other materials. The Greenberg show at the Philadelphia Convention Center, December 14-15, 1991, sold a total of 600 such tables. Upon the advice of one of the deans of the railroad nostalgia I attended the Greenberg's Philadelphia show with a camcorder; he said that this may be the only way that the prices realized for railroadiana in this dynamic national market could be documented.

Judgemental Criteria

Even when hard price data of sales of materials similar to those found in the Baldwin-Hamilton Company archives have been

assembled, judgement has to be exercised. Considerations of condition and age operate in this market as with all markets. The tracings dated 1900 normally would fetch more than ones drawn in 1961. Except where the information is all important, condition is a most weighty criterion for establishing value. Experienced dealers in railroading know that the more "frame-able" an item is the more value it will bring in the buff market. Size along with this "wall-power" operates in tracings; the larger and more inclusive an illustration -- such as an elevation of the entire locomotive -- the more money it will bring. But recognizable sub-assemblies such as the cab or trucks fetch decent prices. This principle even operates for parts such as bells, headlights, and name plates. In short, I have used a four cornered standard throughout the appraisal -- especially with tracings and drawings -- and balanced the factors of age, condition, size, and the importance of the object or machine being depicted.

Since benchmarks established by the sale of similar materials are not the sale of the specific items found in this collection, judgements on appropriate comparisons have to be made constantly. The crucial comparison throughout this appraisal was between the steam locomotive experience (from which a certain amount of data is drawn) and world of diesels. Another comparison is the difference between the world of locomotives and the world of stationary engines for maritime and electrical power installations.

Reproduction Costs

There is another special set of criteria when it comes to

tracings and photographs; and that is the cost of reproducing them for purchase by a willing buyer. It is particularly appropriate to use reproduction costs as one technique to establish dollar value for the tracings and for the photographs in the BLW/BLH collection. A certain part of the renewal parts business carried on by BLH and B-HC from 1962 to 1991 was the supply of photocopy (mainly blueprints) of certain drawings and tracings. I suspect that the Pennsylvania Historical and Museum Commission will be using this collection in the same way for scenic railways and restorers of old locomotives.

The most dramatic example of the sale of blueprints of tracings came in 1991 when two mining companies, one in the United States and one in South America, each paid \$16,000.00 for a complete set of blueprints for dump cars. One set had 204 blueprints for an average of \$78.40 per blueprint; the other set was 387 blueprints or \$41.34 each. Likewise, railroad museums do a brisk business in copies of their photographs of locomotives and rolling stock. The numerous pictures in this collection will form a rich basis for the creation of this kind of income.

"Collection Value"

In appraising this collection I used another criterion which goes beyond the sale of individual items. This is based on the principle that certain groups of materials have a research value beyond the total which could be achieved by selling the individual pieces one at a time. There are research libraries and other institutions in Pennsylvania and beyond that are devoted to

American business, industrial, and technological history. These institutions purchase collections with research value. There are many facets of the BLW/BLH that provide documentation of the industrial and technological development and progress from 1900 to 1960.

As a librarian associated with such research organizations for over thirty years and familiar with the scholars who use their collections, I have used my judgement of the "collection value" of various groups of materials that have coherence, integrity, and provide important insights into American industrial history. Accordingly I have solicited testimonials on the importance of the BLW/BLH collection from scholars, curators and other persons who know the fields of American railroading, technology, business and industry. The following men have received a summary of the nature and extent of the Baldwin Locomotive Works/Baldwin-Lima-Hamilton Corporation historical materials and agreed to send me their assessments of the importance of this collection:

Dr. Harold Cox, Professor of History, Wilkes College; author on railroad technical subjects.

Hugh Gibb, former Curator of Industrial Collections, Hagley Museum and Library; author on railroad subjects; Historian of the National Railway Historical Society.

Dr. Roger Grant, Professor of History, University of Akron; author on railroad subjects; editor of Railroad History, publication of the Railway Locomotive and Historical Society.

Dr. David A. Hounshell, Henry Luce Professor of Technology and Social Change; author of articles and books on American technology, industry and science.

Robert L. Johnson, Curator of Whistles in the Woods, a museum of early technology.

- Benjamin F. G. Kline, Curator, Railroad Museum of Pennsylvania.
- Dr. Albro Martin, Emeritus Professor of History, Bradley University; author of books and articles on railroad history.
- Dr. Stephen M. Salsbury, Professor of Economic History, University of Sydney (Australia); author of articles and books on American railroads.
- Dr. Philip Scranton, Professor of History, Rutgers University, Camden; Director, Center for the History of Business, Technology and Society; author of articles and books on American industry with special emphasis on Pennsylvania.
- Robert M. Vogel, former Curator, Division of Mechanical and Civil Engineering, Smithsonian Institution; author of articles on engines and machines; founder of the society for Industrial Archeology.
- Dr. William Withuhn, Curator, Division of Transportation, Smithsonian Institution; author of articles on railroads.
[See Appendix 3 for their letters and vitae.]

Electric Locomotives

The Baldwin-Hamilton Company has preserved a remarkably complete record of the Baldwin Locomotive Works (BLW's) development and manufacture of mining and industrial locomotives. Starting before 1896 the BLW joined with Westinghouse Electric & Manufacturing Co. (WE&MCo.) to provide motive power to mining and industrial firms in the United States and throughout the world. This joint effort is well documented in the records described below:

(1) Card files showing overseas sales of electric (and steam) locomotives by both customer and by country; domestic card files organized by customers and by classes of locomotive showing the electrical and other equipment installed in each plus how the money

received from each sale was divided between BLW and WEMC. [See Appendix II for examples from this file which stopped in 1906.]

(2) Two volumes of "Class and Weight Records" giving the purchaser of each class of electric locomotive starting in 1896; there are dozens of classes in battery, trolley, gasoline and finally oil and diesel electric locomotives. Each class started at number 1 and customer of each number of each class was recorded.

(3) The advent of the diesel electric in the mid-1920's was documented in the "Electric Work" series of 11 volumes from 1906 into the 1930's. Since these volumes recorded what went on and into each locomotive, a close examination of technological change is possible. Just as these larger diesel locomotives arrived on the sparse Depression landscape, BLW absorbed the George Whitcomb Company, a competitor in the small mining and industrial locomotive market.

(4) Literally thousands of tracings flesh out the summary records mentioned above. Due to meticulous record keeping the tracings used on each particular locomotive is preserved for future repairs or complaints. There are bills of materials, drawing records, "card numbers" giving access to certain drawings, and other means to keep control of drawings and patterns. The earliest extant tracings date to 1896 and are minor works of art that sometimes took more than the normal 10 hour day to complete; during certain periods the hours for drawing then tracing a piece of a machine or establishing the elevation were recorded in a corner along with the class of locomotive and customer. The condition of

the tracings (sometimes redrawn after constant wear) varies in direct proportion to the popularity of certain classes or the universal character of a part for all classes. Even though BLW used the finest Irish linen tracing cloth, wear and tear of constant use is apparent.

(5) Finally there are miscellaneous items from vertical files, and record center storage boxes to enrich the understanding of this facet of BLW history. The major types of materials are photographs, operation and maintenance manuals, maintenance bulletins, advertising brochures, price list volumes, bills of materials, specification lists, research files, vendor files and trade and parts catalogs of different manufacturing firms. Some of these types may be mixed in single boxes or file drawers.

The mixture in these well-traveled BLW/BLH archives goes well beyond types of materials in file drawers or boxes. Given this organizational continuum over time, candidly there are no clear demarcation points within classes of materials. That is to say that in the various volumes and drawings it is impossible to make a separation between pure electric locomotives and diesel electric locomotives. The experimentation, development, and manufacture of diesel electric locomotives gradually penetrates specifications, card files, work books, tracings, and all classes of records. It was an evolutionary process with no hard lines, sudden discoveries, or major break throughs. Although the organization of this appraisal and inventory will reflect changes in the systems to organize data and the drawings, these changes may mask the

continuities of tradition and standard practice.

One further aspect of the appraisal process should be noted. The BLW mergers of firms in the Philadelphia area in the late 1920's and early 1930's are represented in the files by tracings with De La Vergne, Southwark, and I. P. Morris markings mixed in with BLW tracings. Since Baldwin took care of the foreign sale of Whitcomb locomotives starting in the 1930's some records of that activity remain. Arbitrary separation of records had to be made to preserve the identity and integrity of the Hamilton, Austin-Western, Whitcomb, and Sterling records that were shipped to repositories other than the Pennsylvania Historical and Museum Commission. Most of the separations were clear cut, but since the actual construction of certain products was moved to Philadelphia after the late 1940's some records of these other entities were too diffuse to be sorted out. This is probably most true with tracings and drawings dated after 1951.