APPRENTICE TRAINING IN THE GLASS INDUSTRY

development of a new program at Thatcher Manufacturing Company

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The perennial question where to find Journeymen Bottlemachine Operators for the glass industry has been answered in part by an intensified training program for apprentices, instituted by Thatcher Manufacturing Co., at its Saugus, California facility.

The transient nature of a Journeyman is well known in the glass industry. As a result, to recruit and replace operators and maintain production has been almost impossible for the last few years.

The management group at Thatcher decided to solve the problem by selecting and training intelligent young career-minded men to operate the bottle-making machines. Keeping in mind that the next few years will create a demand for experienced people unequalled in the history of the glass industry, an intensified program was developed.

There are several methods and approaches to a training program for Forming Department personnel. However, research into the field indicated there were no formal training programs in operation. Therefore starting from scratch, Thatcher engaged the services of an experienced trainer and told him, "Develop a program!" This is the result of a year's study into the needs, methods and procedures necessary to turn out efficient and capable operators.

PROGRAM PLANNING

As glass manufacturers, we are concerned with the progress being made in container and related fields. We became interested in the mechanical and electrical development inasmuch as all commercial glass jars are now made by machine. Therefore it was deemed expedient that the trainee must become knowledgeable with the material with which he would work and the machine that formed the container, as well as the problems encountered in the manufacturing of glass containers.

After much trial and error it was decided the only way to do an effective job was to take the trainees for a definite period of time and eliminate all other duties so that full attention could be given to the instruction.

A training room was built and an operable I.S. (individual section) machine installed. A simulated working forehearth and instrument were also placed in the training room. A large number of bottles with the different types of defects were assembled and study and informational books were prepared.

The ideal class size was fixed at six students who were selected for their interest, intelligence and mechanical ability. Tests were administered to determine their level of knowledge and to adapt instruction to their comprehension.

Instruction time was established as 120 hours or three weeks. Prior to each day's training, the students were taken to the machine floor and close examination made of the area under study, so that when discussions of particular areas or equipment took place they would have an awareness of what was being explained.

COURSE CONTENT

The first week's instruction covers the history and theory of glass making, including batch materials and how the melt takes place. They study the workability of glass, chord and its attendant problems; the operation of the furnace and the forehearth, temperature control, viscosity and homogenization of glass, the feeder mechanism, the P.I.V. (variable speed control) and training in taking optical readings.

The section is stripped and the boys are trained to place equipment on the I.S. machine. Adjustments, cushioning, set time and training in setting the drum buttons, timing the drum, gob shape and delivery, and swabbing, is given.

The second week's instruction places the trainee with a Journeyman Operator who has the apprentice swab, make set outs, check ware and as he grows in ability he is permitted to run the machine. Each week the trainee is evaluated by the instructor, the foreman, and anyone else who has had personal contact with him.

The third week of instruction is again in the classroom where he is retrained in his weak areas as noted from the evaluation. Concentrated attention is given to ware defects, their causes and corrections. This is done by the three "W" method; Where is the defect occuring? What is causing it? and What to do about it?
Experts are brought in to talk about hot and cold end relationships, quality control, customer service, preventative maintenance, the handling of mold equipment, and annealing.

ATTITUDES AND RESULTS

Much time is spent on attitudinal changes, developing pride in their work, fostering a competitive spirit and developing a professional approach to the skills learned.

Upon completion of the 120 hours the boys are returned to the machine floor where they are assigned to a machine. Records of their production are kept and of the first seventeen graduates, their average production has been 91% for 106 shifts they operated.

Follow-up is constant and present plans call for refresher training after watching them on the machine floor for several months, as well as giving them courses in advanced techniques of bottle making.

We at Thatcher recognize that these apprentices are not Journeymen Operators, that they are trained in the skills of operating but they must now acquire that practical experience which will enable them to make highly commercial ware.

Work is something the handicapped can do. Hire them.

The President's Committee
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