



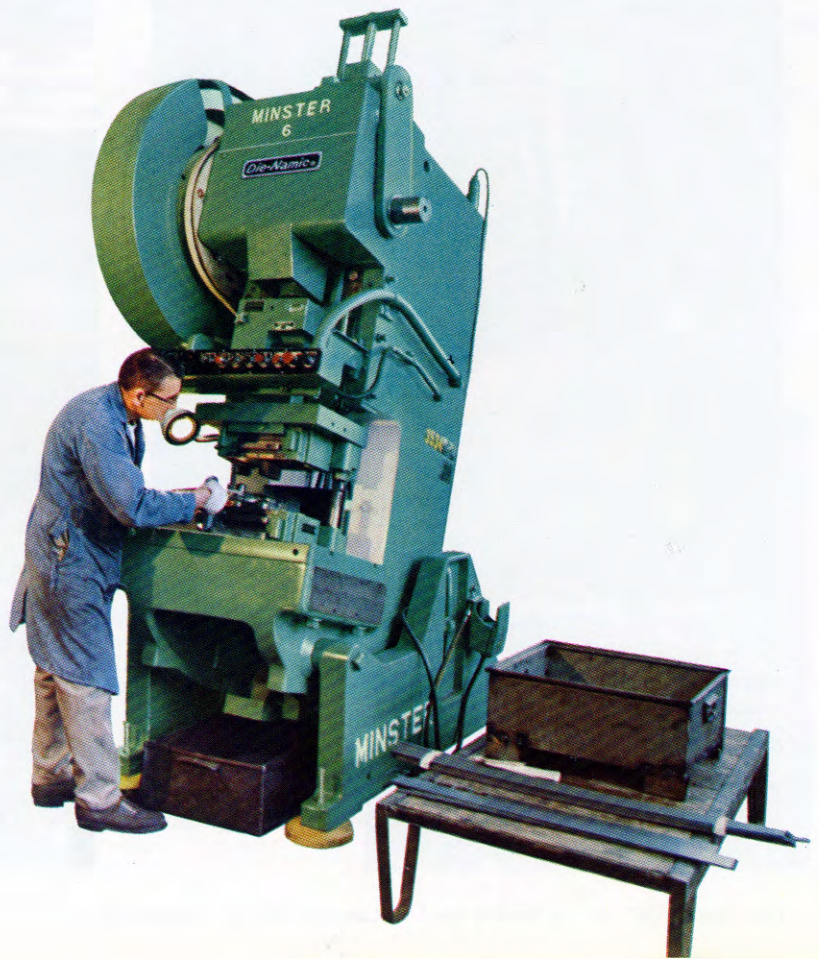
Mr. John J. Lang, Staff Assistant to Vice President, Mfr., American Seating with an Alert Classroom Unit Table and Chair

**How did American Seating
obtain profitable short-run stamping
and lower production costs?**

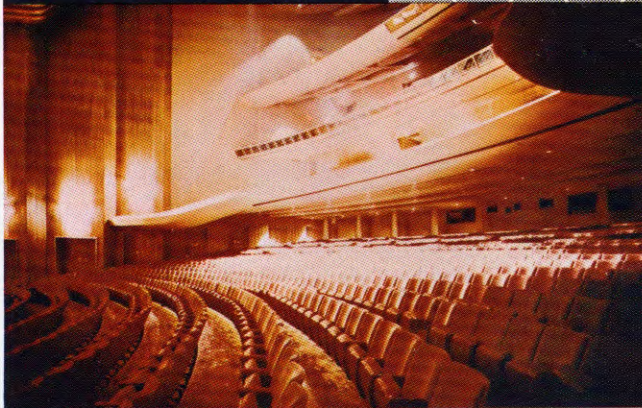


Mr. Spenser Brittain, Equipment Engineer, American Seating, sits in a Retracting Theatre Chair from their Stellar® Series

**with the
MINSTER *Die-Namic*® PROCESS**



**AMERICAN
SEATING**



Sometime, today or tomorrow, you, or one of your children, will probably sit in a product of American Seating, Grand Rapids, Michigan. This company is the world's largest producer of seating for schools, churches, theatres, stadiums, auditoriums, hospitals and transportation equipment.

The tremendous growth of these markets is causing a veritable "seating explosion," with greatly increased demand for seats of all kinds.

Needed: Versatile Parts Production Scheduling



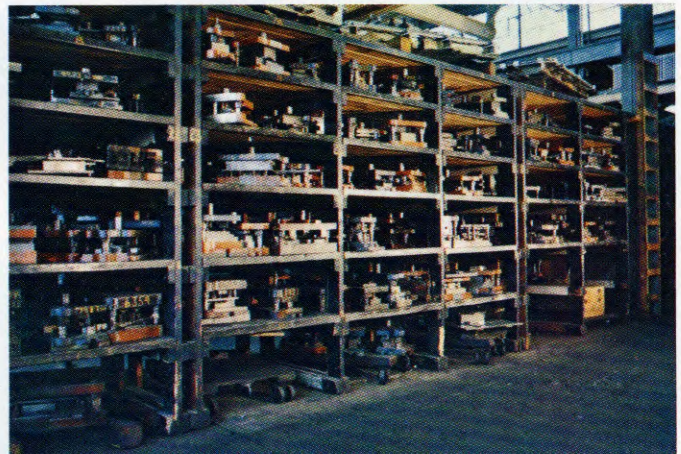
Mr. Ernest Wierenga, Supt. Steel Plant, American Seating, with Foldaway Seating

According to Mr. Ernest Wierenga, "As our product line grew, American Seating's requirements for individual customer order requirements intensified. Brackets, clips, arms, clamps, feet, hinges, many types of small stampings in limited quantities, had to be run to meet final assembly schedules.



"Conventional presses, dies and production control techniques could not be used. The frequency of runs and short length of runs were too costly. Our central die storage was too remotely located from some presses and on some piece parts, die setting hours exceeded running time.

"Our tool room facilities were overloaded with die tryout and scheduling became a problem. It became mandatory that we somehow get more efficient short-run stamping operations. Then, early in 1966, we heard about the Minster Die-Namic Process."



Conventional Die Storage

Research Group studies Die-Namic Process

A four-man research group comprised of John J. Lang, Spenser Brittain, R. C. Gauthier and Ernest Wierenga, visited The Minster Machine Company to study the Die-Namic Process and determine if it would apply to their own production problems. By June 1966 two No. 6 Die-Namic presses had been delivered and put into operation. A third was delivered in September.

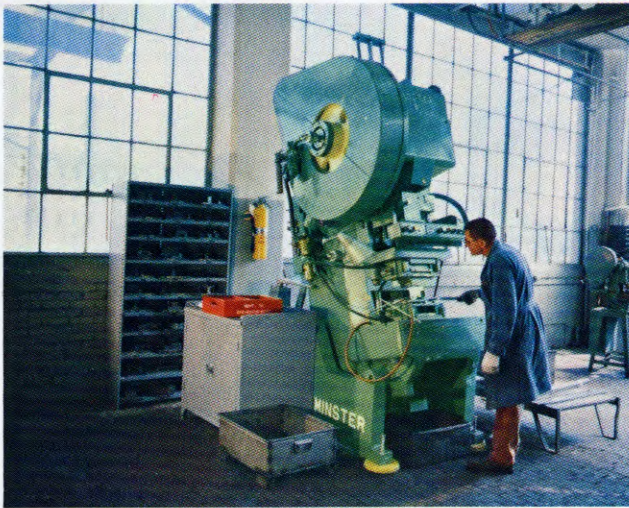
MINSTER'S *Die-Namic* PROCESS paid off from the start

American Seating has applied the Die-Namic Process in three areas of its stamping operations.

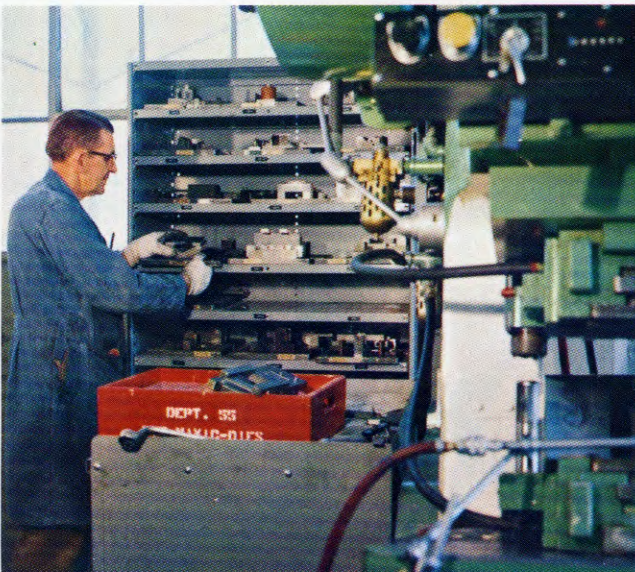
Mr. R. C. Gauthier explains how Die-Namic has solved the company's short-run stamping problems and lowered production costs.

"With the Die-Namic standard die plates we save about 50% of the cost of each conventional die-set previously used. Our savings in die design range from one to two hours per die. It now costs us 20% to 30% less to build a Die-Namic die. Our die-makers are more confident and more productive when building one because they know they have constant alignment. The job is easier.

"At the press location, too, the operator is a busier, more productive man because he has everything he needs for steady, consistent short-run parts production.



"Combining the responsibilities of die setting, piece part inspection and approval into the operator's classification has provided a high degree of scheduling flexibility for the supervisor. It has eliminated a source of idle time created when three individuals are involved on the job assignment. The Die-Namic dies are stored on shelves next to the press and the operator can change a die in 90 seconds and keep on going.



Mr. R. C. Gauthier, Supt. Tooling, American Seating, in a Non-Recliner Bus Seat

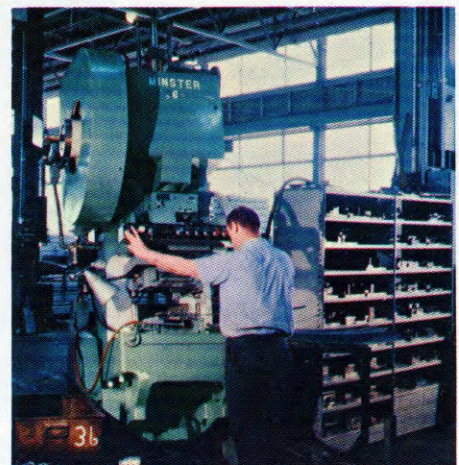
"The die setter's skill and experience for the conventional dies are still utilized on long run jobs throughout the plant.

"Our parts scheduling is now extremely flexible. We can make a wider variety of products in less time than we ever could before the Die-Namic Process was installed. The lower cost method of stamping small quantities of special custom design parts has assisted in manufacturing, at a profit, the custom type order."

The Die-Namic installation in the Transportation seating department (left) is typical of how the process works. Die-Namic dies used here are kept on shelves next to the press. Die accessories are stored in a small cabinet. Short runs are made quickly as the press operator makes his own die changes as required by job orders.

In the Steel Plant (below) another No. 6 Die-Namic Press is used in the same manner. Dies are stored at the press. Job orders and material are delivered to the press location. Parts production is kept right on schedule.

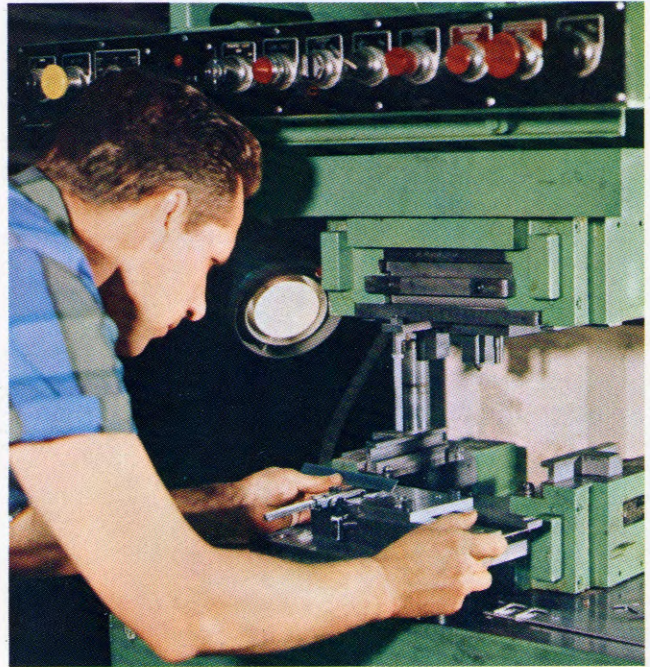
American Seating currently has 85 dies in production and, in addition to new die requirements, are converting (re-mounting) nearly 90 more conventional dies onto Die-Namic plates. Although they have not yet utilized the full capacity of the Die-Namic presses, the process is already paying for itself.



Die-Namic in the Toolroom at American Seating

The Minster Die-Namic Process has reduced die-handling time by 10% to 15% in the Toolroom. Dies and magnesium alignment fixtures can be moved by hand rather than chain hoist. Die try-out time is also reduced substantially. A new

Die-Namic die can be put in the press, parts made, inspected and approved in just minutes. No waiting for lengthy conventional die try-out.



**A *Die-Namic* press can do the work of 3 presses.
You can obtain more profitable production with it.**

The Die-Namic Process:

- Lowers Die Cost
- Eliminates Die Sets
- Reduces Set-up Time
- More than doubles press production
- Simplifies handling
- Saves Storage Space

The Minster Die-Namic Process is supplied as a "package" including the unique O.B.I. Die-Namic press, fixtures, die plates and accessories. Want to know more about Die-Namic? You should take the following steps.

1. Review Bulletin 37 which tells the full technical story of Die-Namic.
2. View our 20 minute film demonstration of the Die-Namic Process.
3. Visit Minster and let us show you a Die-Namic demonstration.
4. Have a Minster Die-Namic Engineer study your press operations.

To make arrangements, contact your local Minster representative or write to Manager, Die-Namic Department, The Minster Machine Company, Minster, Ohio 45865

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