Profits Can Be Overhead

Perforated Steel Ceilings, Panels Could Be a Rising Profit Performer

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t's profit for the wall and ceiling contractor, and it's the greatest dollar value available in noise reduction control for the designer.

That's what perforated metal ceiling and wall panels provide in both commercial and industrial application.

Using perforated metal as noise reduction control as high as 1.0 dB can be obtained. No other product on today's market can make such a claim — and perforated tiles and panels are practically indestructible.

The other advantages of this product is its noncombustibility while carrying a Class “A” or better fire rating designation, long product life (some systems have been in 25 years and are still in perfect condition), and the ease of cleaning.

Panels may be taken out, cleaned, repainted, redecorated and then reinstalled or used in a completely new type installation.

For a contractor looking around for diversification possibilities, the market is limitless. Ceiling and wall panels may be used in all commercial, communication, educational, hospital, industrial, public building, recreational, residential, retail, and theatrical fields.

The perforated metal panel is ideal for machine enclosures, machine hoods, factory partitions, wall and ceilings, and baffles.

Despite a slightly higher initial cost than the “soft ceilings” — wood fiber, sugar cane fiber, vinyl covered fiber-glass, etc. — the farsighted architects or engineers will specify perforated metal.

Life cycle studies show that a 10-year period will allow the perforated metal ceiling to equal the overall costs of the “soft ceiling” with greater savings then for maintenance, building alterations, partition changes, replacement breakage or damage.

A 20-year cost analysis shows less cost for the metal ceiling.

The origin of the perforated metal noise reduction industry is traceable to Dr. Charles F. Burgess, a University of Wisconsin professor, who founded the C. F. Burgess Laboratories. This led to developments in radiant heating, cooling and acoustical ceilings.

Burgess’ work and research involved mining and treatment of mining products, the development of the “B” battery which became an industry standard, surgical dressings. The latter, following World War I, was found useful for insulation and it was mixed with sawdust and bark to develop a product called Balsam-Wood.

In 1926, Burgess announced that his Laboratories would investigate the phenomena of sound to improve the acoustical properties in auditoriums. One of his first applications was to use Balsam-Wood blankets as a noise absorber.

Draping the walls with the blankets did offer some acceptable results but, in a few months, it was a sorry looking sight as the blankets began sagging and collected soot and dust.

That’s when R. F. Norris, of the Laboratories, came up with a facing of perforated metal to be used over the Balsam-Wood. It increased the sound absorbing quality even though only a small percentage of its area was perforated. On August 27, 1929, the first patent for perforating metal was issued to Norris who immediately assigned it to the Burgess Laboratories.

The Laboratories went into production, promoting the advantages of the product which are little changed from today. It was only a short while before the perforated metal tiles backed with 1-inch thick absorbent materials — and trademarked as Sanacoustic Tile — soon began showing up in factories, offices, stores, restaurants, broadcasting studios and other places.

The description ran the gamut from “some sort of wallboard full of little holes” to the cynical “it can’t be metal because metal would make the sounds bounce off and add to the noise.” Nevertheless, Sanacoustic Tile succeeded admirably in reducing din and expanded the fame of Burgess.

In later years, virtually all perforated sheet metal, especially that used in connection with ceiling venti-
lation, became familiarly known to the trade as “Burgess Metal.”

An important marketing decision came in 1929 when Dr. Burgess gave Johns-Manville an exclusive royalty contract to handle Sanacoustic Tile sales. It was a logical move for Johns-Manville because the company had been installing a fabric type of facing which was perforated.

The Burgess metal, though, cut deeply into the JM market almost as soon as the former was introduced.

In 1928, perforated metal panels took another large step when Dr. Burgess’ only daughter married an Englishman, Eric Cotton. Cotton returned to England that same year with the objective of establishing the Burgess Steel Ceiling Company.

Today, this company is one of Europe’s largest manufacturers of steel ceilings. The company has unrivaled experience in the acoustical field and is available to give expert advice to architects, engineers, and builders on materials relating to ceiling installations and construction.

Dr. Burgess died in 1943 but the organization he created continued its expansion. A year later, the Acoustic Division of The Burgess Battery Company became the Burgess-Manning Company, a separate corporation.

It was under the auspices of Burgess-Manning that experiments proved the efficacy of air distribution through the perforated metal. The system — called the Multivent — was first used in railroad cars permitting air conditioning without drafts.

A subsequent modification was known as Acoustivent. This innovation allows the air to pass around the sound absorbent pads through specially constructed air ducts.

The next development step occurred in 1948 when a Norwegian inventor, Gunnar Frenger, came to the United States with a complicated system for an acoustical radiant heating ceiling. Burgess-Manning
took an option on Frenger’s proposed license and after a thorough investigation became the United States licensee.

Years of development work on the Frenger ceiling provided its thermal and acoustical efficiency.

Appearance, maintenance difficulty and costs proved to be the system’s undoing. Still, though, the basic idea was sound and years of experiments finally paid off with the elemental Tee bar system, now in current use.

After being severely tested for both pan and design research, the system was ready for installation in the fall of 1953.

This was the forerunner of all the present air vent ceiling systems.

Today’s perforated aluminum and steel ceiling and side wall industry owes almost everything to the Burgess Laboratories. The Laboratories held 17 patents covering every ceiling and wall subject.

Perforating metal, the development of the Acousticmeter, the development of furring strips, the development of the ventilating system, the multiple attachment of air receptacles, the acoustical treatment of walls, vehicular ventilating systems, and the method and apparatus for expanding sheeting metal . . . all of these technical breakthroughs are the subjects of Burgess patents.

In 1962 the various Burgess companies were incorporated into one conglomerate named “The Burgess Industries.” The company is internationally known and is listed on The American Stock Exchange.

At the same time, the British company also changed its name to Burgess Industries. There, though, the company has gone farther than merely acoustical products.

Burgess Industries, now under the management of Burgess’ grandson, Charles E. Cotton, O. B. E., produces heavy machinery and mechanical products which are in great demand on the continent.

During the life of the patents many licenses were granted to various manufacturers interested in producing perforated metal products but with only a few exceptions all of the companies failed to produce the volume that had been expected by the Burgess-Manning Company.

Again, after the expiration of the patents, “imitators” shot up all over the world. Naturally, over the years new designs, various sizes, and types of perforations as well as new methods of manufacture and fabrication have been developed.

Many of these new companies failed to survive.

With increased architectural recognition and use, the companies who have survived view the future with considerable optimism.