

Frost & Sullivan Award for Product Innovation



AWARD DESCRIPTION

The Frost & Sullivan Award for Product Innovation is presented each year to the company that has demonstrated excellence in new products and technologies within their industry. The recipient company has shown innovation by launching a broad line of emerging products and technologies.

RESEARCH METHODOLOGY

To choose a recipient of this award, the analyst team tracks all new product launches, R&D spending, products in development, and new product features and modifications. This is accomplished through interviews with all the market participants, and extensive secondary and technology research. All new product launches and new products in development in each company are compared and evaluated based on degree of innovation and customer satisfaction. Companies are then ranked by number of new product launches and new products in development.

MEASUREMENT CRITERIA

In addition to the methodology describe above, there are specific criteria used to determine final competitor rankings in this industry. The recipient of this award has excelled based on one or more of the following criteria:

- Significance of new product(s) in their industry
- Competitive advantage of new product(s) in their industry
- Product innovation in terms of unique or revolutionary technology
- Product acceptance in the marketplace
- New product value-added services provided to customers
- Number of competitors with similar product(s)

AWARD RECIPIENT: GRAY*STAR

The 2004 Frost & Sullivan Product Innovation Award recipient is GRAY*STAR, Inc., for the introduction of its Genesis Irradiator™. GRAY*STAR, Inc., is a privately held company which was incorporated to manufacture and introduce innovative irradiation equipment specifically for food products. This award is presented to GRAY*STAR for its ability to introduce a line of gamma irradiators with small footprint as well as lower capital and area costs. GRAY*STAR, Inc., is a privately held company whose main objective is to introduction irradiation equipment that are specifically



designed to meet the food irradiation needs in the market. In view of providing an innovative and cost effective solution to its customers, GRAY*STAR, Inc., introduced the Genesis Irradiator™ in 2003. The first Genesis Irradiator™ was sold to CFC Logistics, Inc. It was installed at CFC Logistics' cold storage facility in Milford Township (PA) and was fully operational on October 3rd., 2003.

The Genesis Irradiator™ is the first of its kind. It is specifically designed as a commercial piece of equipment as opposed to a "facility". The advantage of the Genesis Irradiator™ is that it can be installed inside an existing packaging or a processing plant and be a part of the existing line of equipment. Traditionally, irradiation equipment has always been manufactured and installed in a separate facility, which required food irradiation customers to transport their food products that were to be irradiated to and from the facility. This resulted in an increase in transportation costs, which were passed on to customers. With the introduction of the Genesis Irradiator™, the food processing companies, as well as the consumers, can save on the added transportation costs to the food product.

Frost & Sullivan recognises Genesis Irradiator™ because of its following features:

- Self-Contained Unit
- Lower Capital Investment
- Small Footprint
- Short Lead-time
- Lower Risk of Radiation Exposure

Self-Contained Unit

The Genesis Irradiator™ is a self-contained irradiation equipment that can be easily installed in the customer's facility. A self-contained device is one in which the shielding required for operation is an integral part of the device. The Genesis Irradiator™ is a category III, underwater gamma irradiator. It is intrinsically safe, reducing safety related costs common to other categories of commercial irradiators.

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Lower Capital Investment

The Genesis Irradiator™ is a competitively priced gamma irradiator that can be purchased at \$1.6 million, excluding the price of Cobalt-60 radiation source. The start up capital requirements for the customer are much lower compared to competitive irradiators which can cost between \$6 million to \$15 million. So, as compared to other types of irradiation equipment that are currently available in the market, the Genesis Irradiator™ is more affordable to its customers. Furthermore, unlike X-Ray and E-Beam and other gamma irradiators, the Genesis Irradiator™ does not require massive concrete shielding or complicated interlocks to protect the workers from the radiation.

Smaller Footprint

The Genesis Irradiator™ has the advantage of having a significantly smaller footprint than competitive units. The Genesis Irradiator™, including office and support space, occupies only 1,600 square feet as compared to more than 10,000 square feet for its competitors' equipment. This allows the unit to be installed at existing food processing facilities without sacrificing valuable floor space.

Short Lead-time

The Genesis Irradiator™ can be manufactured and shipped to the site on two standard trucks, where it can be installed and operational within six months. This manufacturing lead-time for Genesis Irradiator™ is short when compared to its competitors that take as much as two and half years to have the equipment operational. The longer lead-time for GRAY*STAR's competitors is mainly because they have to build an entire facility with multiple contractors on site. In the rapidly changing market scenario, clients prefer shorter lead-time for starting a facility.

Lower Risk of Radiation Exposure

One of the advantage that the Genesis Irradiator™ offers is that the unit irradiates products under a pool of water. At the bottom of the pool, the product is irradiated in a stationary position on two sides of a fixed dry plenum that contains the source of radiation. The pool's construction consists of two prefabricated rectangular steel tanks. More than 12 feet of water above the plenum shields the radiation, providing radiation protection to the workers.



GRAY*STAR, Inc's efforts in product innovation have led to the introduction of revolutionary Genesis Irradiator™ that has met the consumers needs for a low cost irradiation solution. As a mark of appreciation to GRAY*STAR, Inc's effort in product innovation by introducing a irradiator that has offered a solution to the longtime challenges faced by the food industry, Frost & Sullivan is pleased to award GRAY*STAR, Inc. with its 2004 Product Innovation Award.

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