Smart Solutions for Safe and Hygienic Food Manufacturing Operations

Industry Fact Sheet
September 2012
The task of the food processing industry is to take crops or farm animal products and use them to produce all kinds of foodstuffs. Despite a stagnant economy, food and beverage companies keep generating revenue and intend to increase investment levels on new products and technology to fuel growth, according to a recent survey by KPMG*. While investing in growth, companies remain focused on costs and efficiency, and indicate they are increasing emphasis on food safety and regulatory compliance.

**Focus on the changing regulatory environment**
Businesses in the food sector are proactively addressing changes in the regulatory environment, such as the Food Safety Modernization Act and EU Regulations. They are also proactively addressing risk management related issues, an area where foodborne illnesses require a very high level of attention.

**Foodborne Illnesses - a Growing Threat**
A foodborne disease is any illness resulting from the consumption of food which is contaminated by pathogenic bacteria, viruses or parasites as well as chemical agents. Foodborne diseases pose a growing threat to public health worldwide.

* KPMG’s 2012 Food & Beverage Industry Outlook Survey
The most common effect of foodborne diseases takes the form of gastrointestinal symptoms but such diseases can also lead to chronic, life-threatening conditions including neurological or immunological disorders as well as multorgan failure, cancer and death. Recent global developments are increasingly challenging international health security. These developments include the growing industrialization and trade of food production and the emergence of new or antibiotic-resistant pathogens. Although we do not currently have an exact figure of the global impact of foodborne diseases on society, businesses and trade, the latest estimations are of hundreds of billions of dollars.

- The Center for Disease Control, a US Federal agency promoting health and safety, estimates that there are roughly 48 million cases, 3,000 deaths, and 128,000 hospitalizations from foodborne pathogens each year in the US only. Children, the elderly, pregnant and post-partum women and individuals with compromised immune systems are at highest risk of developing complications from food-borne illness.
- A new study by a former U.S. Food and Drug Administration (FDA) economist estimates the total economic impact of foodborne illness across the nation to be a combined $152 billion annually.
- Robert Scharff, a professor of consumer science at Ohio State University, elaborated a cost-of-illness model that includes “economic estimates for medical costs, productivity losses, food recalls and illness-related mortality.”
- In industrialized countries, the percentage of the population suffering from foodborne diseases each year has been reported to be up to 30%.
- 31 known pathogens are responsible for 9.4 million illnesses (20% of the total), 55,961 annual hospitalizations (44% of the total) and 1,351 deaths (44% of the total). The remaining unknown/unspecified pathogens are responsible for 38.4 million illnesses (80% of the total), 71,878 annual hospitalizations (56% of the total) and 1,686 deaths (56% of the total).

A food recall occurs when there is reason to believe that a food may cause consumers to become ill. A food manufacturer or distributor initiates the recall to take foods off the market. In some situations, food recalls are requested by government agencies. A food recall can cost millions and can be potentially fatal for a business.

Said Jeff Evers, Senior Engineering Manager at Butterball LLC:

"Hygiene is important, that’s why I like the Interroll product. Look, we’re only a box of bad meat away from being out of business".
Impact of Foodborne Diseases

- **People in the US:**
  - 48 million cases
  - 3.000 deaths

- **Total Economic Impact:**
  - $152 billion annually

- **Population suffering from Foodborne Diseases:**
  - 55,961 annual hospitalizations
  - 1,351 deaths

- **Industrialized Countries:**
  - Up to 30% annually

- **Responsible Pathogens (Known):**
  - 31 known
  - 38.4 million illnesses
  - 71,878 annual hospitalizations
  - 1,686 deaths

- **Responsible Pathogens (Unknown):**
  - 1,565 single food commodity outbreaks

- **Germs (and some foods) responsible for most foodborne illnesses:**
  - Campylobacter (poultry)
  - E. coli O157 (ground beef, leafy greens, raw milk)
  - Listeria (deli meats, unpasteurized soft cheeses, produce)
  - Salmonella (eggs, poultry, meat, produce)
  - Vibrio (raw oysters)
  - Norovirus in many foods (e.g., sandwiches, salads)
  - Toxoplasma (meat)
Food Safety Comparison

<table>
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<th>Ingress Protection Rate (IP)</th>
<th>Food-Safe Materials</th>
<th>Chemical Resistance</th>
<th>Hygienic Design</th>
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<tr>
<td>IP 54</td>
<td>Stainless Steel Enclosure</td>
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<td>IP 66 - IP 69 K</td>
<td>EHEDG</td>
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<tr>
<td>Mixed Materials - No Certification</td>
<td>Ecolab 5 Years</td>
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Interroll
SYNCHRONOUS DRUM MOTOR

Interroll SYNCHRONOUS DRUM MOTOR SERIES

Standard GEAR MOTOR

1
2
3
4
The Interroll Hygienic Drum Motors

On top of these scary numbers, food safety is becoming increasingly important for the food processing sector for another number of reasons:

- Food-borne illnesses continue to plague the global supply chain (see the latest bird flu outbreak in China).
- The European Union and the FDA in the US keep increasing enforcement of existing regulations, giving food safety and food manufacturing enforcement greater visibility.
- There is a trend to focus on health claims made by food manufacturers (for example, my product helps reduce cholesterol etc. These are the so called “functional foods”).
- Product recall is threatening the food industry, with increasing vigilance and monitoring of the quality and safety of foods put on the market shelves; public perception and attitudes towards bacteria-related issues are heightened because of headline making stories.

As a consequence we can expect further pressure on food manufacturers to improve quality control in the coming years. Risk management and risk reduction are the start to better food safety practices. To help food manufacturers all over the world comply with all of the strict regulations in terms of hygiene in their material handling processes, Interroll has created the most hygienic conveyor drive currently available on the market.

Conventional gear motors are bulky, complex to install, and most importantly, non-hygienic: tested and verified as non-cleanable by the independent organization Danish Technological Institute, they require expensive cabinets and guarding.

The Interroll Drum Motor, instead, can be hygienically cleaned and disinfected regularly using high pressure water, steam and chemicals. This helps you achieve the highest possible hygiene standards.

Interroll’s own R&D department has designed the Synchronous Drum Motor according to EHEDG guidelines using only first class materials approved by FDA and EC regulation 1935/2004. Furthermore, with its standard IP 66 and IP69k sealing systems the Interroll Synchronous Drum Motor is the ideal solution for wet and high pressure wash-down applications. The Interroll Drum Motor features optimum cleanability which provides for the lowest possible levels of Salmonella, Listeria, E-Coli and other harmful microorganisms in the production environment.

Guaranteed Lifetime of Materials

The Chemical Resistance of the materials used for Interroll Drum Motor has been validated in real environmental tests. Cleaning specialist Ecolab* has certified a 5 year minimum lifetime of materials when exposed to typical cleaning and sanitation procedures using the Topax range of products.

EHEDG Design

The Interroll Drum Motor is the best answer for businesses in the food manufacturing sector all over the world looking for an outstanding solution for their material handling requirements.

To know more about the entire range of our hygienic products for the food sector, visit www.interroll.com

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Inspired by efficiency

Established in 1959 Interroll has grown to become the world’s leading supplier of key products for internal logistics. Whether boxes, pallets or soft goods are to be handled, no other supplier has such a complete product range on offer. That is why system integrators, OEMs and operators select Interroll as their partner for their internal logistics business. Worldwide.

The Interroll global network ensures quick delivery and superior service for every local customer. We inspire our customers and provide opportunities for them to increase efficiency.

Interroll.com

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