

RISKTOPICS

Strategies for managing risk of counterfeit products
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INTRODUCTION

According to Counterfeiting Intelligence Bureau and other sources, counterfeiting is a global problem that is growing with expanding pace of globalization accounting for \$600 billion and 5-7% of world trade. The International Chamber of Commerce - Commercial Crime Services (CCS) formed Counterfeiting Intelligence Bureau (CIB) in 1985 to help businesses meet this global challenge. International Chamber of Commerce has also created a database (Business Action to Stop Counterfeiting and Piracy) with facts, reports and relevant information to raise awareness of this issue and the need for better enforcement action.

Counterfeiting is a deceptive representation of imitation or fake products as original or genuine products. Counterfeiting products is not a new problem and is not limited to just currency or branded consumer goods. It is now expanding into industrial, construction and even critical aviation and military applications with alarming potential consequences. Ever since the enactment of the Federal Fastener Quality Act in 1990 in response to several incidents in 1984-85 involving counterfeit high strength heat-treated SAE grade 8 fasteners, many subsequent laws and global regulations have attempted to address the challenge of counterfeit products.

SCOPE OF THE PROBLEM

The publicity for counterfeit retail consumer products, such as branded watches and purses in retail distribution, may create a perception that counterfeiting is a harmless financial crime that affects trademark piracy and copyright infringement of branded products. On the contrary, it has many risk management dimensions with widespread global challenges. It is certainly not a victimless crime and the potential impact and risk management implications range from intellectual property protection to health and safety exposures. Counterfeit products can be found as replacement parts or even as OEM components in different product assemblies and applications in many industries and types of product applications. Common examples of counterfeit products include:

- High strength mechanical fasteners (bolts)
- Construction (bridges, cranes, high rise building)
- Aircraft (wing attachment, landing gear)
- Military (tanks)
- Bearings
- Electrical and electronic components (extension cords, circuit breakers, relays, electronic chips, switches, transformers)
- Power tools

- Lubricants and adhesives
- Pharmaceuticals and drug products
- Many consumer products (clothing, watches)

The scope of the problem is not just limited to counterfeit component parts and finished products. There have been several reported instances of substandard steel and other raw materials and commodities that fail to meet the quality as represented or specified. Although accidents involving counterfeit products and parts do not get a lot of publicity and there is no formal process for tracking and monitoring this problem, there is ample evidence that indicates use of counterfeit products in many safety-critical applications such as aircrafts, automobiles, bridge construction, refineries, construction equipment and even nuclear power plant and military equipment.

Many industries have focused on this problem to understand its scope and challenges. According to World Customs Organization, sale of counterfeit products represents about 7% of world trade. International Anti-Counterfeiting Coalition (IACC) reports that counterfeit products trade has increased from \$5.5 billion in 1982 to approximately \$600 billion today.

SAFETY-CRITICAL APPLICATIONS

Although use of counterfeit products threatens many safety-critical applications, the use of counterfeit fasteners in industrial, construction and electrical products in safety-critical applications has received the most attention. The US Congress conducted a two-year investigation and published a report "The Threat From Substandard Fasteners: Is America Losing Its Grip?" The problem of counterfeit fasteners became known in 1980s with several accident reports, notably a 1987 fastener failure on a bridge joint on Interstate 10 in Lake Charles, LA and bolt failure noted by the construction crew while building United Airlines terminal at O'Hare International Airport in Chicago, IL. The investigations revealed that many of these counterfeit fasteners were imported into the US. They had dimensional discrepancies, were made of inferior materials, or were not heat-treated consistently to required specification. They had incorrect head marks to indicate high strength classification. Another problem reported was with false corrosion protection claims from thinner plating thickness or substituting zinc plating for cadmium. This investigation and collaborative efforts of various standards organizations (National Institute of Standards and Technology, American National Standards Institute, American Society of Mechanical Engineers, American Society for Testing Materials, Industrial Fasteners Institute, Society of Automotive Engineers and others) resulted in passage of Fastener Quality Act <http://ts.nist.gov/WeightsAndMeasures/fqa.cfm/> in 1990, which was further amended in 1999.

Underwriter's Laboratory (UL) <http://www.ul.com/ace/> has an aggressive anti-counterfeiting strategy that focuses on electrical components. They have issued white papers and also issue alert bulletins periodically. Government-Industry Data Exchange Program (GIDEP) is a cooperative program between government and industry participants that shares certain technical data and is a useful source of information. Department of Energy also maintains a website for information guidance on suspect and counterfeit products at <https://www.directives.doe.gov/directives/0414.1-EGuide-3/view>.

SAFETY AND LIABILITY RISKS

Procurement and use of counterfeit products and components in critical applications, whether knowingly or otherwise, will require replacement to prevent accident or critical malfunction. Late stage detection of presence of counterfeit components can result in cost overruns and expensive project delays. In worst-case scenario, failure, malfunction or poor performance may lead to an accident with tragic health and safety consequences and loss of life. In addition, even unknowing use of counterfeit products or component as OEM components in a finished product, in a construction project or a repair/maintenance can result in potential contractual and liability risks. Ignorance or lack of knowledge about counterfeit products may be difficult to establish in case of foreseeability and willful blindness to bargain-basement prices, substandard quality performance or procurement through unusual alternate distribution channels.

PREVENTION STRATEGIES

Many fake and counterfeit products are so identical in look and feel to genuine parts that it is getting harder to distinguish them visually. Procurement of safety-critical replacement parts can be a serious challenge and make you vulnerable to a catastrophic risk of failure from unknowing use of counterfeit components. Moreover, conventional quality control efforts are found to be inadequate to address the challenge of counterfeit products. Whether you are a manufacturer, contractor, distributor or a retailer, counterfeit products can affect your profits, market share and brand reputation and present a serious product liability risk from bodily injury and property damage.

Although specific strategies may vary by type of products, industry segment, and procurement process, anti-counterfeiting experts and organizations recommend implementation of a comprehensive strategy to help reduce the risk of counterfeit

products. The strategy should address two aspects. The first one is related to the procurement and related processes and the second one is related to detection and screening for counterfeit products. The following are some of the suggested elements in the development of a prevention and mitigation strategy to combat this risk.

- Always know your source for procurement of critical products and components. Buying from authorized distributors provides at least some assurance of product quality and integrity of authentic parts. Buying on the Internet or other alternate sources or importing directly increases your chance of becoming a victim of counterfeit product frauds.
- If you are forced to procure a critical part from an alternate source because a part is not available from an authorized distribution channel, it is important to increase your own verification efforts to ensure integrity of parts by additional testing efforts. Sometimes, reconditioned and salvaged parts may be sold as new but may not meet specifications as represented.
- Do not buy on lowest cost criteria alone. In tough economic times, there is temptation to buy at lowest cost. If the price offered is a deeply discounted bargain basement price compared to known price range for branded products, it should raise suspicion alerting further investigation.
- Report suspected counterfeit products and distribution channels to law enforcement authorities and brand manufacturers. Ignoring knowledge about specific counterfeit products and sources of distribution can perpetuate this risk with potential for tragic consequences.

The second part of the strategy should address detection and screening of incoming goods before they are used. US Customs Services and authorities in many countries have portside inspection of incoming import shipments, but compared to the volume of imports, they cannot be relied upon to stop imports of fake counterfeit products into the country. Many counterfeit products are deceptively similar to authentic parts with logos, trademark and other look and feel characteristics and are getting harder to distinguish visually. However, they lack product integrity and performance quality of genuine parts. Although this does present a challenge, experts suggest some tips that may be helpful in this screening effort.

- Unusual packaging or box
- Inconsistent appearance, color, dimensions with specifications
- Variations in items in a package
- Modifications, touch up and cosmetic beautification of old/salvaged parts
- Altered or worn manufacturer's name plate, model, serial numbers
- Incomplete or inconsistent information on name plate, product markings or certification
- Irregularities in various documentation
 - Shipping papers
 - Certification and technical data
 - Lacking signatures and other required authentication of certain documents
 - Chemical and material test report and certification documents with handwritten entries or other indication (white out) of possible alterations

VULNERABLE MANUFACTURERS

If you are a manufacturer of branded products in high demand with a significant market share, you are a likely victim and vulnerable to counterfeit market for your products. As a manufacturer, counterfeit products unfairly compete with your sales on deep discounted prices and unsuspecting buyers may procure and use these fake products. Poor product performance and integrity may adversely affect customer satisfaction threatening future sales and market share and profits. This is a clear threat to your intellectual property rights that can result in serious damage to your brand and reputation. In addition, these can also present potential product liability and litigation risks.

Underwriter's Laboratories (UL) has a very aggressive program for prevention of counterfeit products with fake UL labels and provides excellent guidance to manufacturers on their website. Many manufacturers are incorporating product-specific markings on their products that are harder to copy and can help distinguish their authentic products. Examples include UL and other certification labels, holographic markings and RFID tags on electrical components, tools and equipment and high strength fasteners.

It is important for a manufacturer to have a strong strategy to combat this risk. Develop and implement an anti-counterfeiting program across an entire supply chain and vendors. This means due diligence in selection of vendors and monitoring the entire supply chain, including business partners involved in contract production, assembly, shipping, warehousing, and distribution channels for product integrity. Sourcing from geographical regions for known high levels of counterfeiting and fake products will require extra vigilance. The following are additional examples of suggested strategies from several experts.

- Ensure due diligence in registering and protection of intellectual property assets including trademarks and patents. US Customs Service has a simple and inexpensive process for registering of trademark information. This information is sent to all the customs agents and port of entry for inspection of incoming import shipments.
- Implement a strong education and awareness efforts of business partners and law enforcement agencies in identifiers for your trademark and copyright products.
- Consider integrating a security identification feature, such as a holographic image, micro etching, or RFID tag in your product that is difficult for counterfeiters to duplicate.
- Incorporate an active market surveillance program of vigilance and reporting violators to authorities for prosecution.

CONCLUSION

With globalization, the problem and challenges of counterfeit products are multiplying. Whether you are a consumer, manufacturer, a construction company or a maintenance operation, everyone is exposed to and affected by unsafe fake and counterfeit products. Even in the absence of any systematic way to compile information on safety impact of these products, there are reports of serious examples of fake counterfeit products making their way into some critical applications including aerospace, nuclear, construction, military and other applications. A concerted global effort with cooperation and vigilance of all stakeholders including governments and regulatory enforcement agencies, vulnerable manufacturers, supply chain and distribution channels, and victims of unsafe counterfeit products will be required to combat this threat.

RESOURCES

- The Underwriter's Laboratory <http://www.ul.com/ace/>
- Anti-Counterfeiting Global Resources Compiled by The Underwriter's Laboratory <http://www.ul.com/ace/combat.html>
- Counterfeiting Intelligence Bureau
- International Anti Counterfeiting Coalition, Inc.
- "Stemming the Flood of Counterfeit Fasteners" by Valenti, Michael- Mechanical Engineering-CIME, February 1, 1993.
- Fastener Quality Act <http://ts.nist.gov/WeightsAndMeasures/fqa.cfm/>
- Suspect/Counterfeit Items Awareness Training: June 2007 Revision 6: Department of Energy, United States of America.
- "What are Counterfeiting and Piracy Costing the American Economy" by US Chamber of Commerce http://www.fnal.gov/directorate/OQBP/sci/sci_reference_docs/SC1%20Costs%20to%20Economy%20uschamber.pdf
- <http://www.indfast.org/default.asp>
- "Ten Tips to Fight Pharmaceutical Counterfeiting" <http://www.pharmamanufacturing.com/articles/2008/071.html>

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