

## Sandon Global – Metal decorating study observations

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The following observations have been captured as part of a market study of the 2-part metal decoration market conducted by Sandon Global. The findings highlight recent technical developments on a variety of fronts that indicate how through innovation this growing market is set for significant change. Key drivers include:

- Sustainability
- Health & Safety
- Productivity

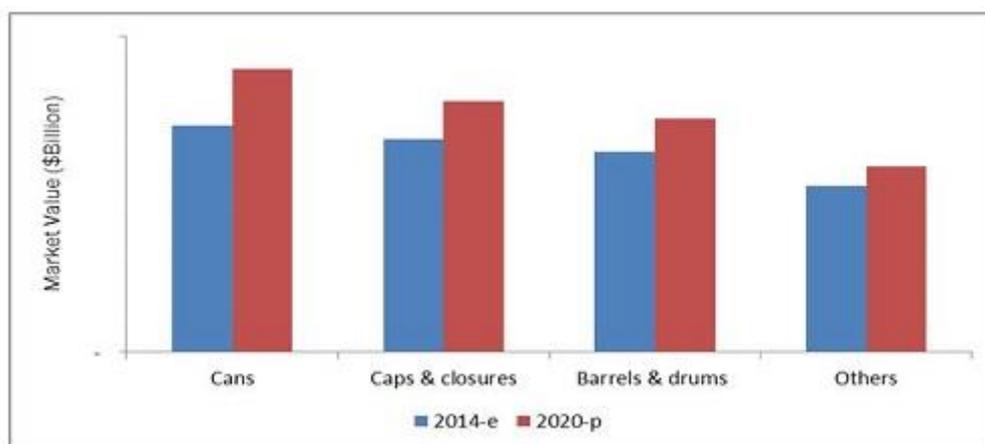
### General market observations

*Extracts from Market And Markets Industry Report*

The metal packaging market has been growing with an increasing urbanised population, increasing consumption pattern of canned food, developing economics, increase in the usage of recycled material in the manufacturing process, and significantly increased demand for packaged food.

The competition from paper and plastic packaging poses a challenge to the metal packaging market however the recent initiatives seeking to reduce the use of plastic packaging and the level of ocean pollution is set to significantly impact the world of food and beverage packaging.

**Metal Packaging Market Size (Value), by Type, 2014-2020 (\$Million)**



E- Estimated, P-Projected

Source: Expert Interviews and MarketsandMarkets Analysis

The global metal packaging market is projected to be valued at \$135.69 billion by 2020. The Asia-Pacific region is projected to grow at the highest CAGR of 4.4% during the review period, that is, from 2015 to 2020.

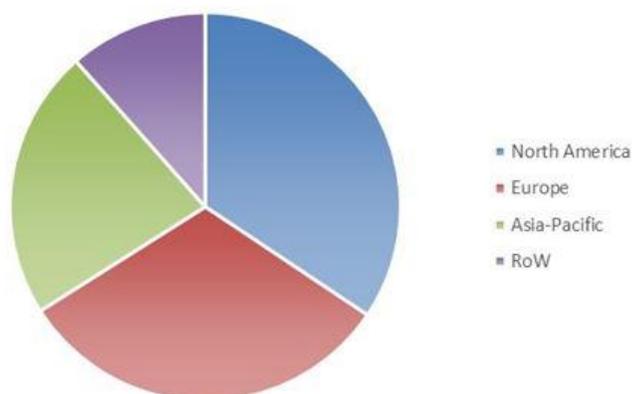
The food segment is projected to grow at the highest CAGR of 4.0% from 2015 to 2020. The metal packaging market was dominated by steel material segments, which accounted for 68% of the total market in 2014. The global market is marked with intense competition due to the presence of a large number of both big and small firms. New product launches, mergers & acquisitions, and partnerships and expansions are the key strategies adopted by market players to ensure their growth in the market. The key players in this market are Alcoa Incorporated (U.S.), Amcor Limited (Australia), Ardagh Group (Europe), Ball Corporation (U.S.), CPMC (China), Crown Holdings (Europe), Greif Incorporated (U.S.), Silgan Holdings (Connecticut, U.S.) and Ton Yi Industrial (China).

The North America region accounted for around 34.4 % of the total market share in terms of value, followed by the European and Asia-Pacific regions. In the recent years, Asia-Pacific has tremendously progressed in the metal packaging market which primarily includes emerging markets such as India and China. The North America realm held the majority of share in 2015 and accounted 34.4% of the total market, followed by Europe and Asia-pacific market with the share of 31.6% and 22.5% respectively. The main driving force in North America region is the changing lifestyle and convenience of packaged products. The emerging economies such as India and China have played a vital role in the rising growth rate of the industry.

Metal packaging is attaining popularity because of changing consumer taste, rising sale of grocery products including frozen and chilled food, and changing lifestyle. Improving standard of living, rising income, steadily growing economies, and increasing alcoholic consumption represent key growth drivers in the Asia-Pacific region. Pharmaceuticals and cosmetics industry is propelling the growth of this market as metal protects the content from external environment. Increasing beverage and canned food stimulate demand of the metal packaging market. Recycling of the end product in the product life cycle without degradation in the quality, adds to an advantage over other packaging material like plastic and paper.

Metal cans are the most recycled packaging containers across the globe. In several countries such as Germany, Brazil, Switzerland, and China, the recycling rate of metal packaging product is 90% or more. By using recycled aluminum, greenhouse gas emission is reduced by 95%.

**Metal Packaging Market Share, by Region, 2014 (\$Million)**



**Sustainability:** The MPMA (Metal Packaging Manufacturers Association) state, “All metal packaging can be recycled. The UK recycling rate for cans has tripled in the last ten years.” Their vision for the industry is that no metal packaging should go to landfill and with the surge in public opinion and brands and retailers announcing a reduction in the use of plastic packaging alternative materials are being explored by packaging technicians and designers. Metal is an obvious and sustainable option given its high recyclability and the continued roll-out of deposit-based collection schemes incentivising consumers to return their waste for reprocessing. Metals sustainability is driven by recycling because recycling saves up to 95% of the raw materials and energy needed to make new metal.

A recent article in the Packaging News reported following a recent survey by a large packaging group. It revealed that from a cross section of brand managers and designers almost 90% of them believed that sustainability in packaging would be important or very important over the next 12 months – 51.4% believed it to be very important. The results also revealed that 72.9% see the introduction of sustainable features and packaging to their products as an opportunity for growth, with more than half (51.4%) already creating packaging with sustainable features.

Again, the MPMA have attempted to capitalise on this shift in material selection by utilising infographics to communicate the benefits of using metal packaging as a sustainable alternative.

## YES WE CAN!

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**Cans are made for the circular economy**

Beverage cans are fully and infinitely recyclable without loss of quality.

**60 days**

It's possible for a beverage can to be back on the shelf in 60 days.

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**Cans are easily stackable and take up less space**

**2.5x** A truck is able to carry 2.5 times more beverage when contained in cans.

**4x** A pallet is able to carry 4 times more filled cases of cans than other alternatives.

**Cans stimulate the senses**

Every drink always tastes exactly as it should, because the can keeps carbonation in and oxygen and light out.

Thanks to the hermetic seal, the smell of the beverage remains unchanged.

The characteristic sound of a can being opened is a unique indicator that the drink inside is absolutely fresh.

Glow-in-the-dark, tactile, high definition prints... The possibilities in can design are almost infinite.

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**Cans chill quickly**

Beverages in cans chill more quickly and feel extra fresh to the touch. They also stay cold for a longer time.

**Cans are lightweight**

As cans are light and convenient, they are great for refreshments on the go.

**Cans are unbreakable**

Despite being thin and light, cans are unbreakable.

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**Cans come in different shapes and sizes**

No matter what you want, there's always a solution in the vast range of can sizes, shapes and prints.

Metal Packaging Europe

## **Technical Solutions To Support Growth**

With this predicted growth in mind how can the metal decoration market respond through innovation?

Sandon Global have developed a solution that tackles a variety of issues with a solution we have registered as the GravLite™ System. The key drivers are outlined below in turn.

### **Productivity**

#### **Aim: To Increase Capacity Of 2-Part Metal Decorator Lines To Meet Demand.**

GravLite™ System (patent pending no. GB1520915.8)

Is a unique, lightweight sleeve designed for use in over varnish units in the canning industry, applying a protective and decorative clear or tactile varnish as an alternative to traditional methods used in the metal decorating process.

Changing and maintaining conventional gravure heads can be time consuming and therefore costly process. GravLite™ has been developed to replace heavier gravure cylinders typically weighing 24kg with a 2kg alternative which in turn reduces downtime during cleaning or replacing by 43.5 minutes per head resulting in a bottom line savings illustrated in our example below.

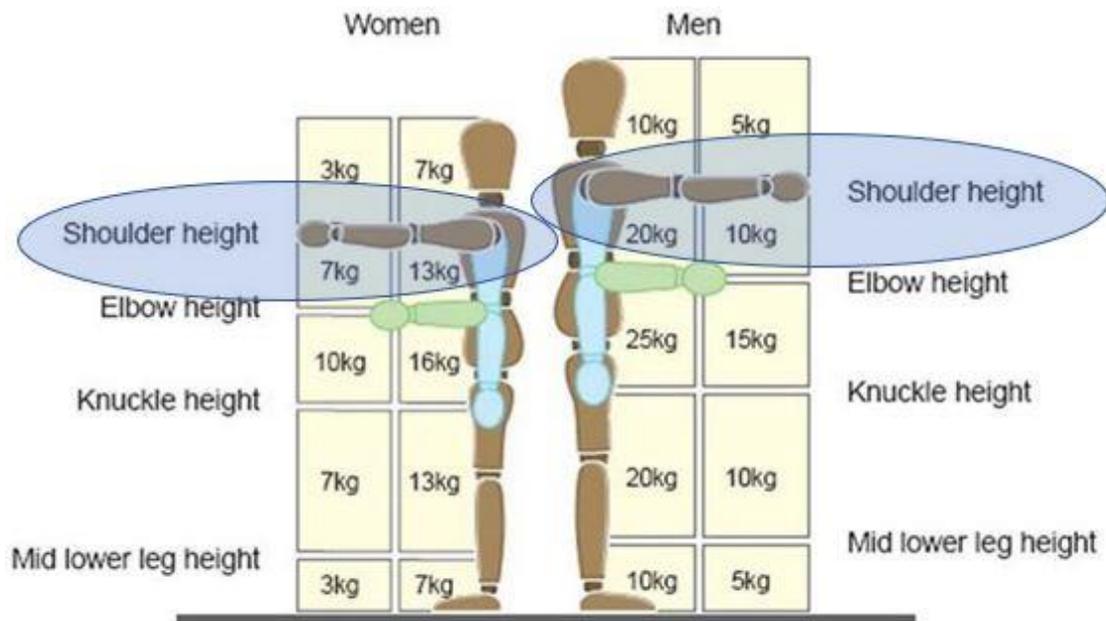
Based on a Concorde press running at 1650 aluminium cans per minute we estimate 45 minutes can be saved for every varnish changeover; equating to £2,950 in production value. Therefore, at an average market value of £40 per 1000 cans the additional capacity will deliver a return on investment within 3 months of installation.

The GravLite™ System can be retro fitted to 100% of decorator lines, so making the switch to is simple. Furthermore GravLite™ cylinders can be refurbished and re-used time and time again; coupled with the reduced cost in shipping due to its lightweight design it is a more sustainable solution than conventional gravure cylinders. Contributing to your sustainability objectives. Training programmes are delivered on-site for our customers operators to help with the understanding usage, care and cleaning of the GravLite™ System. We see this as an essential requirement to maximise the benefits of the equipment.

### **Health & Safety**

#### **Aim: To Reduce The Risks Associated With Manual Handling, Leading To Safer Working Conditions And A Reduction In Injury And Absence.**

The importance of Health & Safety cannot be understated, indeed, the Health & Safety Executive guidelines in their "Manual Handling at Work" publication state clearly that the recommended safe maximum weight for lifting at work are displayed in the diagram below for both outstretched and close lifting. Based on this it is evident that the GravLite™ at 2kg is well within these guidelines however traditional gravure cylinders at 24kg are significantly over the recommended maximum for both men and women.



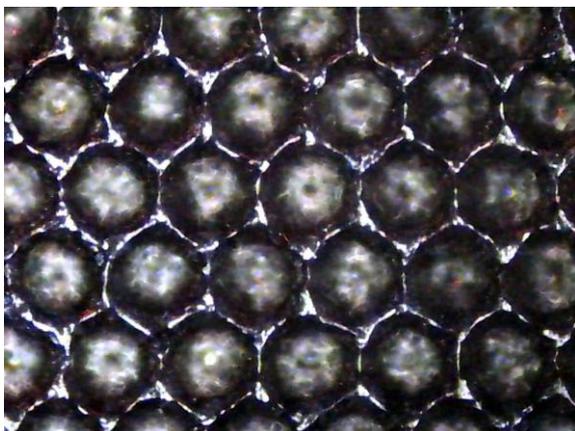
Source: HSE "Manual Handling at Work" (Ref. INDG143 Rev3 published Nov. 2012)

### Print Quality

**Aim: To maintain consistent quality and repeatability whilst reducing material costs.**

As an award-winning precision engineering company Sandon Global ensures complete control over manufacture from start to finish, and never compromises on raw materials or processing. After a rigorous development programme, the Sandon Global GravLite™ System is first to market and harnesses the latest ceramic, laser engraved sleeve technology.

Sandon Global can match existing engraved screens and volume's, or the customer can utilise our library of innovative engravings that collect and transfer lacquers at a more efficient rate than existing screens. Our unique screens maintain consistent levels of coat weight for longer periods of time than existing screens and can with the appropriate adjustments in the engraving ratios reduce the milligrams per can thus reducing the volume of lacquer material used. Some of the new engraving developments offer the beverage can market opportunities to apply high solid content materials and tactile (paper feel) varnishes which have large size solid particles within their make-up.



Additional advantages of the innovative GravLite™ System include the fact that the engravings stay cleaner for longer, meaning the product quality consistency is improved and the cleanability of the engraved surface is more efficient. The innovative engravings used by Sandon Global are designed to collect and transfer lacquer more efficiently.

## **Sustainability**

It is our intention to hold stock with appropriate partners within the metal decoration market so that efficiencies in replacements worldwide are improved. The parts being a disposable item will reduce companies carbon footprint for shipping either by air or road freight due to the reductions in weight offered by the systems.

## **Credentials and capability**

As an award winning anilox manufacturer currently exporting to 53 countries Sandon Global are well placed to contribute in the metal decorating market. As back to back Gold Medal winner of "Supplier Of The Year" to the European Flexographic Industry Association for the last 5 years we demonstrate our focus on quality of both product and service day in, day out.

With a reputation for continuous investment in research and development adhering to ISO 9001:2015 quality standards. The ability to design, test and manufacture onsite provides the ideal environment for developing unique innovations which in this case has led to an international patent application. The surface of GravLite™ System is coated with ceramic "T-Coat + Plasma" coating technology which is quality tested in our metallurgical laboratory prior to laser engraving and after the coating process. The laser engraving operation is carried out on our state-of-the-art solid state thermal optic lasers.

All manufacturing processes are controlled and carried out at the UK HQ in Runcorn, Cheshire. The culture of the business encourages pride, dedication and professionalism from knowledgeable staff who have been retained for decades. This approach has led to numerous awards listed in the footer and our customers achieving print awards both in the UK and internationally including best in show status. This backdrop of success and innovation in the print segment has seen Sandon Global enter the metal decorating market with great confidence that our innovations improve production efficiency, reduce health & safety risks and contribute to the ever-increasing global sustainability objectives. With more solutions in the pipeline we are actively building an alternative portfolio for the metal decoration market.

This video link <https://vimeo.com/218604684> provides a simple demonstration, conveying the benefits of the GravLite™ System.

Interested parties can contact [marketing@sandonglobal.com](mailto:marketing@sandonglobal.com) or call +44 (0)1928 579 774 to find out more.

## **About Sandon Global**

Founded in 2004 Sandon Global manufacture and refurbish anilox rolls, sleeves and gravure cylinders from its specialist UK engineering facility in Runcorn Cheshire.

Exporting to 53 countries and ISO 9001 accredited, Sandon pride themselves on innovation. Advance manufacturing the latest generation in anilox engravings and supplying ancillary products, including sleeve covers to protect the engraved surface, volume measuring equipment and sleeve storage.

Sandon Global is a one stop operation in which it fully manufactures 100% of all its component parts in-house. This allows the company to fully invest in R&D and develop the new concepts of manufacture and consistency of its products. These capabilities include precision engineering and advanced manufacturing using two of the latest generation of Thermal plasma T-Coat + systems to which it applies its Chromium Oxide Ceramic coating to its sleeve systems and engraves them with its State of the Art Solid state Thermal Laser engraving equipment. To fulfil the quality of the Beverage Can manufacturing industries requirements the company have recently invested In a fully computerised CMN machine so that all component parts are accurately measured from a known datum. The machine is calibrated to within 1 micron 0.001mm and housed in a temperature-controlled environment.

Acknowledged by the industry as a leading brand in the flexographic market, Sandon Global have received numerous industry and national awards including.

- "Made In Halton" 2018 – Halton Chambers Of Commerce
- "Exporter Of The Year" 2018 – St. Helens Chamber Of Commerce
- EFIA Gold Award "Supplier of the Year" 2018
- British Chambers of Commerce SME National Award 2017
- EFIA Gold Award 'Supplier of the Year' 2017
- Queen's Award for Enterprise in International Trade 2016
- EFIA Gold Award 'Supplier of the Year' 2016
- EFIA Gold Award 'Supplier of the Year' 2015
- EFIA Gold Award 'Supplier of the Year' 2014
- EFIA Gold Award 'Supplier of the Year' 2011
- EFIA Silver Award 'Supplier of the Year' 2013
- EFIA Silver Award 'Supplier of the Year' 2010
- EFIA Silver Award 'Supplier of the Year' 2009
- EFIA Silver Award 'Supplier of the Year' 2008
- DS Smith Groups Innovation Award 2008