

World Major Household Appliances Demand and & Supplies and Porcelain (Vitreous) Enamels usage”

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Dear Colleges and fiends,

Enrico and myself have been cooperating in exchanging statistics on appliances market in our long business life and in occasion of this 23rd International Enamellers Congress of Florence, We decided to share our statistics with all of You.

This World Major Household Appliances Demand & Supplies survey is considering dynamics by product line, by major business geographic area and by country from 2010 up to 2018, to understand how the demand is developing, where the production facilities are moving and especially for Cooking Appliances business, that is the major contributor to Porcelain (Vitreous) enamels consumption.

Futhermore, some more focus is deserved to major household appliances demand & production in Europe and in particular to the European cooking appliances business, due to the location of the 23rd International Enamellers Congress in Florence (I) this year.

Market segmentation of porcelain (vitreous) enamels by applications will be also reported in this lecture.

Premise

The sourcing of information of this survey is manifolds:

- Press release of Household Appliances Manufacturers
- Household Appliances dedicated magazines
- Appliance Magazine
- Specialized Marketing Magazine
- Sectorial financial and economic reporting on international and national newspapers
- Household appliances companies balance sheets
- Dedicated surveys on household appliances business issued by international banks (ex.: international comparison program by Mundial Bank)
- Sectorial Industrial Associations reports (ex.: CECED)
- Sectorial Components Suppliers information
- Sectorial Row materials Suppliers information .

World Major Household Appliance Market

No doubt that the business of Major Household Appliances is very important world round.

Its dimension for 2014 is reported in the slide 3, with the volumes breakdown vs. regions and type of appliances.

Demand & Supplies analyses showing where the main produced volumes are.

Asia and Europe still producing more appliances than their Demand (slide 4).

Hot, cold and washing appliances business accounting for almost 1/3 each of the total turnover in 2014 (slides 5 and 6).

In slide 7 is highlighted the same concept on the world map.

North America Region Major Household Appliances business trend still expected to increase in the coming 4 Years (slide 8).

Latin America Region Major Household Appliances business growth reaching a solid 6% (slide 9).

Asia Pacific Region Major Household Appliances business trend keeping on moving up very nicely (slide 10).

Africa/Middle East Major Household Appliances business expected to grow optimistically in this period(slide 11).

West Europe Region after the contraction of volume due to relocation of many plants in East Europe and Turkey from 2010 to 2014 (slide 12) expected to recover up to the old numbers for the sake of economy growth from 2015 up to 2018 (slide 13).

World Major Household Appliance players

The Major Household Appliances market structure moving towards globalization more and more by means of aggressive take-over campaigns. Process and production facility relocations in the regions of higher growth taking place.

Small and medium sized appliances companies are either disappearing or being taken over by the stronger players.

At present the first 5 top manufacturers accounting for almost 44% of the total volume (slides 14 and 15).

World Major Household Appliances Market Globalization process moving very fast and expected to continue in the coming years (slides 16_17) .

Pillars supporting Major Household Appliance Business

The main parameters positively affecting the Major Household Appliances growth are population amount of the geographical region, the amount of income of the region population, the level of per capita GDP and the technological expertise and critical mass present in the region and expressed by the high value of their production volume that allow to exploit their low cost profile of labor and energy cost (slide 18_28).

Asia pacific, Mexico, Turkey and East European countries attracting Major Household Appliances production plants offering low production costs and reasonable industrial expertise.

World Cooking Appliances Business

Porcelain (Vitreous) Enamel is mainly used as protective and aesthetic coating in the cooking appliances such as the lining of cooking ovens, hobs and burner grates. The heat resistance of enamel still recognized as unique performing coating in term of Quality/Cost rate by the cooking appliances industries.

World Cooking Appliances demand trend expected to keep on increasing from 2014 to 2018 (slide 29), especially in developing countries, while ranges production facilities are moving in areas of low cost profile and higher growth rate at least for cheap cooking appliances (Mexico, Turkey, Poland, etc).

Porcelain (Vitreous) Enamel volume is following this trend.

Major Household Appliances Sales and Production in Europe

For the sake of the location of the 23rd International Enamellers congress in Florence Italy this year, we would like to look after the European Major Household Appliances business a little bit with more focus.

The 2014's European Total business amounting to 123 million produced pieces versus a demand of 106 million pieces. Europe still exporting 17 million pieces to other regions (slide 30).

More complex is the intra-Europe flow of Major Household Appliances production relocations highlighted in slides 31.

Just a few examples (slides 32_33):

From West Europe (Italia, Spain, Portugal, France, UK, Germany)

- Indesit Italy towards Poland, Turkey e Russia (cooking, WM, DW, Cooling)
- Electrolux Italy towards Poland, Rumenia, Ungheria, Russia, Ukraine
- BSH Germany towards Poland, Turkey, Russia
- Candy Italy/France towards Czech Rep. , Turkey
- Franke – Faber Italy (Hoods) towards Turkey
- Fagor/Brandt Spain towards Poland
- Miele towards Czech Rep.
- Tecnowind Italy(Hoods) towards Rumenia
- Liebeherr towards la Bulgarie

From Asia Pacific

- Samsung S.Korea towards Poland, Russia
- Haier China towards Italy
- LG towards Poland, Russia, Turkey
- Panasonic towards Slovenia (10% Gorenje)

From USA

- Whirlpool towards Italy, France, Poland, Slovakia

From Australia

- Fisher & Paykel to Italia

From Turkey

- Vestel towards Russia
- Arcelik towards Russia, Rumenia

From East to West

- Gorenje towards Finland, Holland

More pronounced is the loss of Major Household Appliances production volume in Italy due to the relocation of plants in Turkey, East Europe in the last years. Cooking ranges business better resisting and showing a lower production contraction than cold and washing appliances market segments (slide 34).

European Cooking Appliances Business

In Europe Cooking appliances business still very much characterized by a Supply higher than local Demand.

Surplus of Cooking appliances production meeting the other region's demand (slide 35).

Porcelain (Vitreous) Enamel consumption is concentrating on cavities application as protective and functional coating, while loosing ground as aesthetic coating on Hobs.

In Italy for instance, Coloured Enamel coating almost halved its volume consumption in the last decade.

Stainless steel and glass hobs replacing enamelled ones. Hobs design trend privileging sharp corners and very flat surfaces, requirements that enamelled surfaces cannot meet easily(slides 36).

World hot water tank (boiler) market

Another Major Household Appliance using enamel is the hot water tank.

Its mission is to produce and maintain a reserve of hot water in the residential buildings for sanitary and drinking water usage.

Enamelled boilers accounting for more than 95% of produced hot water tanks in the world, leaving a small share to stainless steel and copper, only for very small capacity boilers, where the coating specific cost per surface unit is still too high for enamel coating operations.

Usually, the range capacities of enamelled boilers are spanning from 10 L up to 5000 L.

The world production numbers of hot water tank is really important, reaching 66 Million pieces in 2014(slide 37), with China, North America and Europe being the major contributors (slide 38).

The world growth trend of boilers production expected to claim up to 93 Million pieces by 2018 and beneficially affecting the related enamels consumption.

Developing countries growing really at very fast rate (slide 39).

Porcelain (Vitreous) Enamel Market

The world Porcelain (Vitreous) Enamel Market very much affected by the performances of Major Household Appliance and hot water tanks business trends (slide 40) .

Major Household Appliance and hot water tanks businesses accounting for about 32% of the yearly total enamel consumption in 2014 (slide 41), contribution of these two segments expected to become more important in next 4 years due to their segments growing trends (slide 39).

Among the other Porcelain (Vitreous) Enamel segments we have:

- Plumbing ware still very important volume due to China, but expected to decline due to plastics bathtubs in the coming years.

- Enamelled hollowware still resisting in developing countries such as China and ASIA Pacific region but very much shrinking due to their replacement with stainless ones.

Aluminium enamelled pan & pots business increasing, but enamel specific consumption very much lower than previous one.

- Barbecue, Architectural panels, Industrial applications, Chimneys and Connected Flue Pipes are very nice segments, even growing in some areas but with lower volume impact (slide 40).

China still being the biggest contributor in the world, to Porcelain (Vitreous) enamels volume consumptions (slide 40).

Conclusion

World Major Household Appliances Market including hot water heaters still very vital and global

World Major Household Appliances facilities moving towards the Regions with lower labour and energy cost structures

High populated developing countries with high growth rate, highly attracting the W.M.H.A.s Business

Porcelain (vitreous) Enamel consumption very much linked to the trends of Cooking appliances and Hot Water tank production volumes, that will grow more than the other market segments.