ASOCIACE SKLÁŘSKÉHO A KERAMICKÉHO PRŮMYSLU ČR
Association of the Glass and Ceramic Industry of the Czech Republic

ANNUAL REPORT – GLASS AND CERAMIC INDUSTRY OF THE CZECH REPUBLIC 2013

August 2014

ASOCIACE SKLÁŘSKÉHO A KERAMICKÉHO PRŮMYSLU ČR
Association of the Glass and Ceramic Industry of the Czech Republic

Dear friends,

Glass, china and ceramics are grandiose and always modern materials, for which new applications have been occurring even at the present time. They undertake old and also unknown roles, and thanks to this they are more and more fascinating. Glass facades of buildings are larger for transmission of more light and energy to its inhabitants. Also car constructions have greater windows and more functions integrated in glass. Glass and ceramics is still a synonym for modern interiors. Even a simple glass bottle is still irreplaceable and it gets new possibilities of application thanks to new technologies. Have you ever drink wine from plastic "wineglass"? I have, but it is horrible. Shortly, the role of glass and china is not substitutable in our lives. Let alone, that all these materials are, in fact, from its origin, an important and ideal intermediary with the world of design and beauty, and more over, they are useful. Even the white toilet which we meet intimately every day is useful.

Well, the glass and ceramic industry in the Czech Republic is still irreplaceable. And also the art, skill and knowledge of our people, who make and move this craft forward. It obliges us with the hundreds years tradition, to fight for these values and develop them.

The Association of the Glass and Ceramic Industry of the Czech Republic issues the „Annual Report – Glass and Ceramic Industry of the Czech Republic – 2013", where we would like to inform the public about the main economic indices of this industry in 2013, and also about development trends in the period from 2008 till 2013. A chapter dealing with the activities of the Association of the Glass and Ceramic Industry of the Czech Republic is also included in this Report.

Our glass and ceramic industry is constantly an export oriented branch. The decline of demand on foreign markets, especially in the European Union in the first half of 2013 was a cause of a slight decrease of export in some commodities. In spite of this, the demand for good quality Czech products continues and it will always continue. The balance of foreign trade of this industry was 22.855 bill. CZK in 2013, and it strengths again the balance of foreign trade of the whole Czech processing industry.

Dear colleagues and friends, The glass and ceramic industry is a traditional branch of the processing industry of the Czech Republic. During its long-term existence this branch went through periods of prosperity and also recessions. It is possible to say, that it has never face up to such uncertainty and unpredictability of development on markets like in last years. For companies' owners and managers it is necessary not only to predict at least development on markets but also to search new markets and strengthen their marketing activities. So, if you have a corresponding, high quality Czech product, nothing stands in your light.

Have a pleasant journey, and I hope you will find interesting useful information in our Annual Report.

Mr. Petr Mazzolini

The President

of the Association of the Glass and Ceramic Industry of the Czech Republic

ASOCIACE SKLÁŘSKÉHO A KERAMICKÉHO PRŮMYSLU ČR
Association of the Glass and Ceramic Industry of the Czech Republic

TABLE OF CONTENTS

Introduction

1. Association of the Glass and Ceramic Industry of the Czech Republic (page 1)
2. Structure of the glass and ceramic industry in the Czech Republic (page 6)
3. Position of the glass and ceramic industry in the Czech Republic (page 12)
4. Development of the glass and ceramic industry in the period from 2008 to 2013 (page 19)
5. Export and import according to production branches in the period from 2008 to 2013 (page 36)

INTRODUCTION

The Annual Report gives in its introduction part an overview on the position of the glass and ceramic industry within the processing industry of the Czech Republic, its structure and development in the period from 2008 till 2013. A paper on energy demand and emissions of the glass and ceramic industry creates a part of this Report. Further on, an evaluation of the activities of the Association of the Glass and Ceramic Industry of the Czech Republic in the past period is given, as well.

Data processed in the Annual Report are based on data of the Czech Statistical Office (valid at the date of June 30, 2014). These data are completed with information gained from annual reports of the Association members.

Classification and terminology of the processing industry used in the Chapter “Position of the glass and ceramic industry in the Czech Republic” are taken from the Czech Statistical Office.

Time development lines compared in the Chapter “Development of the glass and ceramic industry” are given for the period from 2008 till 2014.

The glass and ceramic industry is in the submitted Annual Report mostly investigated and described separately, i.e. in seven so-called groups. These groups are created by related glass and ceramic production activities as far as technology and marketing. This methodology corresponds to a method of the statistical statement in the Czech Republic.

- **Flat glass** (unfinished and finished flat glass)
- **Container glass** (bottles, preserve glass jars, other glass containers)
- **Glass fibres** (reinforcing/textile fibres, insulating glass fibres)
- **Other glass** (special glasses - laboratory and laboratory apparatus glass, tubing, glass TV components, technical spheres, glass industrial apparatuses, protective welding glass, optical glass, glass blocks, fashion jewellery glass, etc.) **and lighting glass**
- **Utility glass** (drinking glass, glass for household, decorative glass, art glass, etc.)
- **Household china and ceramics** (china ware for household and decorative china, ceramic ware for household, decorative ceramics)
- **Technical ceramics and sanitary ware** (insulators, laboratory china, ceramic products for sanitary purposes, products for technical purposes)

The development in the rest groups created by the production of machinery, equipment and services for the glass and ceramic industry, is not investigated in the Annual Report as the whole. From the point of view of the statistical statement the activities connected with this group are investigated in a number of other subsections of the processing industry, and so it is not possible to process and compare them, especially numerical data, reliably.

ASOCIACE SKLÁŘSKÉHO A KERAMICKÉHO PRŮMYSLU ČR
Association of the Glass and Ceramic Industry of the Czech Republic

1. THE ASSOCIATION OF THE GLASS AND CERAMIC INDUSTRY OF THE CZECH REPUBLIC

The Association of the Glass and Ceramic Industry of the Czech Republic

The Association of the Glass and Ceramic Industry of the Czech Republic is a member of the Confederation of Industry of the Czech Republic and a member of the Glass Alliance Europe. The Association of the Glass and Ceramic Industry of the Czech Republic (Association) was established in 1990 as an interest group of producers of flat, container, technical, utility and lighting glass, glass and mineral fibres, household china, household ceramics and sanitary ware, trade companies, suppliers of machinery, machine and technological equipments and services, specialized schools, research institutes and publishers of specialized journals. Also the Czech Glass Society is a member of the Association. A separate part of this chapter is devoted to the Czech Glass Society.

The Association had 45 members at the date of December 31, 2013. Knauf Insulation, spol. s r.o. became a new member in 2013.

The activities of the Association are focused, especially on the promotion, assertion and defence of interests and demands in relation to the bodies of the state administration, on organizing a mutual cooperation of members in solution of common problems, on rational utilization of local raw materials, on environmental problems solution, on ensuring collective negotiations with respective trade union and making collective bargains, on ensuring a database for strategic decisions of its members, on assistance in search of foreign partners, on coordination of research and development in the glass and ceramic industry in cooperation with specialized schools and workplaces, on expert and financial support in publishing specialized literature and journals, and also on solution of specialized education orientation.

Activities of the Association in 2012

The Association collaborated within the membership in the Confederation of Industry of the Czech Republic (Confederation) on fulfilling the Agenda 2013 on national level. As far as the promotion of interests directly connected with the glass and ceramic industry the Association cooperated with the Czech Glass Society, the Silicate Union and the Czech Union of Fashion Jewellery Producers. The Association worked within the European Union on promotion of interests of the glass and ceramic industries with the Glass Alliance Europe (GAE) and with the CERAME UNIE, respectively.

The plan suggestion for 2013 followed the activities in 2012. The activities in 2013 were divided to the following themes: Support of competitiveness of the glass and ceramic industry, Collective negotiations of higher degree, Education (apprenticeship, secondary and university), Environment, and Services and information. Lobbying for interests of the glass and ceramic industry and activities promoting the Association and its members were an important part of the activities of the Association.

Support of competitiveness of the glass and ceramic industry

The aim was to support competitiveness of glass and ceramic industry products on inland and also on international markets.

The Association cooperated within the membership in the Confederation on elaboration of Economical analysis of environmental and energy legislation and regulation in relation to the competitiveness of the Czech industry. The aim of the Analysis was to give qualified data on expenses of selected environmental regulations and policy to the Czech industry and its competitiveness to the Confederation and participating unions.

Within the membership in the GAE, the Association collaborated actively against the decision of the European Commission on eliminating the glass industry from the list of sectors endangered by carbon leakage. (Definition: Carbon leakage is a term often describing a situation, which can appear when tradesmen, due to expenses on policy in the area of climate, transfer their production to other countries with free access to greenhouse gases and emissions.) The Association collaborated in the Czech Republic with unions of cement and lime producers. The decision on final list of sectors endangered by carbon leakage should be reached during 2014.

On April 4, 2013 a negotiation of the Committee on Anti-Dumping and Anti-Subvention Practices of the European Commission was held. During this negotiation the anti-dumping customs duty for import of ceramic table- and kitchenware (incl. china) coming from the People's Republic of China in amount of 13.1 to 36.1 % for a period of 5 years, was agreed. The Association and its members - Český porcelán, a.s. and THUN 1794, a.s. – actively lobbied at the state administration of the Czech Republic for promotion of anti-dumping customs duty in the whole process not alone but also through the Confederation.

Collective negotiations of higher degree

The Collective agreement of higher degree concluded for the period from 2013 to 2014 was extended to other employers with prevailing activities in the branch signed by CZ-NACE codes 23.1 (production of glass and glass products), 23.41 (production of ceramic and china products, mostly for household), and 23.42 (production of ceramic sanitary ware).

In 2013 the negotiation on Annex 1 to the Collective agreement of higher degree concluded to the period from 2013 to 2014 between the Association and the Trade Union of Employees of Glass and Ceramic Industry and China (Trade Union) proceeded.

The Annex 1 comprised a change of minimum tariffs in container glass, glass fibres and china groups in appendices 1 and 2 of this Collective agreement. The suggestion made by the Trade Union supposed an increase of minimum tariffs by 3 %. After very complicated negotiation both sides agreed the increase of minimum tariffs by 1.5 %.

The Annex 1 was signed by Mr. Petr Mazzolini, the President of the Association and by Dr. Vladimír Kubinec, the Chairman of the Trade Union on January 22, 2014.

Education (apprenticeship, secondary and university)

The Association collaborated with the consortium of the Confederation, the Chamber of Commerce and TREXIMA, s.r.o. on the second stage of the National Qualification System (NSK 2). The representatives of the Association are members of Sector council for glass, ceramics and minerals processing. In 2013 questions of retraining possibilities of craft activities in china and ceramics production were mostly solved. For retraining possibilities there were suggested partial profession qualifications. For instance: for glass cutter there were suggested partial profession qualifications flatter, facet cutter; for ceramics decorator there were suggested partial profession qualifications hand ceramics decoration by spraying, hand ceramics decoration by printing, hand painting decoration of household ceramics, machine decoration of household ceramics. Further on, a suggestion for elaboration of profession qualifications for occupation with requested complete secondary specialized education was processed.

In May 2013 the Secretary of the Association elaborated an analysis of specialized workers demand in the glass industry. (The Silicate Union elaborated such analysis for ceramic industry in the so called Sector Agreement). The analysis documents deficit of specialized workers in the glass and ceramic industry on all levels, and activities of companies for gaining new workers and arising interest of public, i.e. parents in study branches. The Association tried also to express how to help companies in these activities.

Environment

Solution of problems connected with waste flat glass for recycling was a priority in the area of environment in 2013.

The Association elaborated an analysis of appearing and utilization of waste flat glass from demolition, reconstructions and car wrecks. The analysis was a base for negotiation on solution of waste flat glass problems within activities of the Environmental group in the Confederation. The analysis was currently given to the representatives of the Department of Waste of the Ministry of Environment and then discussed with them. The Association supported by the Confederation, succeeded to enforce a part, solving the problems of waste flat glass from demolition, reconstructions (waste glass from car wrecks is solved during their liquidation), to the prepared law on products with finished life.

Services and information

An information bulletin giving reports and news on activities of the Association and its members was published. The members of the Association will receive regularly the bulletin of the GAE and other information coming from the secretary of the GAE. The Information bulletin was published every two or three weeks.

The Secretary of the Association has a database of export and import of glass and ceramic products according to HS/CN codes, according to individual countries. Also a database of employees number, revenues and export development since 1990 is available. Further on, the Association has available a study Trends in the glass industry.

Promotion of the Association and its members

The Association continued in medial promotion of the glass and ceramic industry. The aim was to introduce public with the production and the level of the branch and to contribute to gain new qualified workers to companies and young people to schools of all levels of education.

There were published press reports dealing with expected reality for 2012 and 2013 and expectations to 2014 and given to the Czech Press Agency. In Sklář a keramik journal a preliminary evaluation of 2012 in the glass and ceramic industry in the double issue 3-4 was published.

In January 2013 supplementary information for the article about Czech glassmaking issued in the business journal PROFIT were elaborated. Data on china branch for the Czech Press Agency were elaborated in October. For the Czech Television, programme called Ekonomika 24, data on the situation in the glass industry in 2013 were elaborated in August. Based on this broadcasting there was completed further information for the Czech Information Agency. In November and December there were elaborated data on the development and current situation of the glass industry for the Czech Radio 1 and Czech Radio, foreign broadcasting. In December 2013 a meeting of the representatives of the Association with journalists was held. The theme was the development of the glass and ceramic industry in the European Union and in the Czech Republic and an expected reality 2013 and expectations to 2014. As far as questions regarding specific problems of companies, journalists received contacts to companies' representatives.

For the promotion of the Association and its members the internet sites of the Association were continuously actualized. In autumn 2013 the preparation of internet sites oriented to the glass and ceramic industry (www.skloakeramika.cz) started. Sites include report on glass and ceramics, actualities from this branch, survey of companies and schools, information on actions organized by glass and ceramic organizations, schools and museums.

The Annual Report - Glass and Ceramic Industry of the Czech Republic - 2012 was published.

The Czech Glass Society

The Czech Glass Society is a member of the International Commission on Glass (ICG) and the European Society of Glass Science and Technology (ESG).

The Czech Glass Society was originally established in 1946 as a glass section of the Czechoslovak Glass and Ceramic Society. In present form it exists after division of the Czech and Slovak Federal Republic in 1993 as the Czech Glass Society (CGS).

The CGS is a voluntary organization associating individual and collective members from the production of glass, fashion jewellery and related branches.

Activities of the CGS in 2013

At the date of December 31, 2013 the CGS had 215 individual members and 38 members of art section, i.e. 253 members, further on, 2 subsidiaries (VETROPACK MORAVIA GLASS, a.s., KAVALIERGLASS, a.s.) with 41 members, and 17 collective members.

The activities of the CGS in the international field in Technical Commissions of the International Commission on Glass (ICG) are important: TC 2 - Chemical Durability & Analysis, TC 3 - Basic Glass Science, TC 7 – Nucleation, Crystallisation & Glass-Ceramics, TC 13 - Environment, TC 14 - Gases in Glass, TC 19 - Glass Surface Diagnostics, TC 20 - Glasses for Optoelectronics, TC 21 - Modelling of Melting Processes, TC 23 - Education & Training in Glass Science & Engineering, and TC 25 – Modelling of Glass Forming Processes.

The CGS has its representatives in the council of the ICG.

The highest priority of the CGS in 2013 was organizing of the **23rd International Congress on Glass ICG**. The world glass congresses have been held since 1933 already. The 23rd International Congress was held from June 30 till July 5 in the Congress Centre in Prague. There were registered 703 participants from 43 countries, from which 76 participants were from the Czech Republic. An evaluation of the Congress was published in Sklář a keramik, No. 11-12/2013.

The preparation of the 23rd International Congress on Glass did not influence holding other specialized activities. The 18th seminar of doctorands **Inorganic Non-Metallic Materials – Processes, Technologies, Properties** was held. The organizer was the Institute of Glass and Ceramics of the Institute of Chemical Technology, Prague. Participants were not only doctorands from the Institute of Glass and Ceramics, but also doctorands from the Slovak Technical University Bratislava, University Pardubice and University of Alexander Dubček Trenčín. The CGS was traditionally a co-organizer of the 12th international seminar **Application of modelling at construction, optimization and control of glass furnaces**, being held in Velké Karlovice. The organizer was Glass Service, a.s. Vsetín.

The CGS is a supporter of scientific journal **Ceramics – Silikáty**.

The CGS is an official partner of the **Centre of the Glass Art** in Sázava nad Sázavou. In 2013 the activities of the "Glass club" of the CGS continued.

The year 2013 was already the 63rd year of Sklář a keramik journal publishing and the 90th year of the Czech glass journal publishing. The publishing house of the CGS prepared 6 double issues of the Sklář a keramik journal in 2013, each issue with 52-56 pages. In November 2013 a facebook profile of this journal was prepared (https://cs-cz.facebook.com/sklarakeramik) and there was started work on internet site of the journal. Also the proceedings of abstracts and the programme for the **23rd International Congress on Glass ICG** were published.

2. STRUCTURE OF THE GLASS AND CERAMIC INDUSTRY IN THE CZECH REPUBLIC

The structure of the glass and ceramic industry of the Czech Republic is described below according to the division of individual production branches, as it is used in the following parts of this Annual Report. Companies profiling the branch through their economic importance and prestige are given in individual groups. Further on, also basic information on Czech producers of machinery and equipment and on companies providing services for the glass and ceramic industry and suppliers of basic raw materials, is given.

The number of companies in the Czech Republic with more than 20 employees at the date of June 30, 2014:
CZ-NACE 23.1 - Production of glass and glass products – 108 companies are included. According to the investigated production branches there are 32 producers of flat glass, 38 producers of hollow glass (from which 4 producers of container glass, other companies produce utility glass), 6 producers of glass fibres and products made of, and 32 producers of the other glass (see the following text).
CZ-NACE 23.41 - Production of ceramic and china products, mostly for household and decorative products – 19 companies are included, from which 7 producers of china.
CZ-NACE 23.42 - Production of ceramic sanitary ware – 2 companies are included.
CZ-NACE 23.43 – Production of ceramic insulators and insulation accessories and CZ- NACE 23.44 Production of other technical ceramic products – 13 producers are included.

Flat glass

AGC Flat Glass Czech, a.s.: the key player in the area of flat glass production and processing

The only producer of large-dimension flat glass in the Czech Republic is AGC Flat Glass Czech, a.s., a member of the AGC Group with the seat in Teplice. This company is at present the greatest producer of flat glass and its applications in Central and Eastern Europe. The 100 % owner of the company is Asahi Glass Co. Ltd., Japan.

The activities of AGC Flat Glass Czech, a.s. include the production of basic flat float glass, clear or with defined green tint. It is finished by further transformation to the so-called low-emission glasses controlling the light and energy flow, safety (laminated or toughened) glass, sound insulating glass, matt or painted glasses for exterior and interior applications and mirrors. By further treatment double or triplex insulating glass, bent building glass, furniture glass, glass for solar technique and fire resistant glass, are produced. Beside float glass the company produces dozens of ornamental patterns of cast glass. The trade policy of the company is based on export to the countries of Central and Eastern Europe. The company production is applied also in world distribution channels of the AGC Group.

The activities of AGC Flat Glass Czech, a.s. are supported by distribution channels in the Czech Republic, Slovakia and Poland created by subsidiary companies for distribution of glass for architecture and the building industry. Through them the company is a supplier of important volumes of unfinished flat glass to other independent processing companies.

Great volumes of flat glass are processed in the Czech Republic in the automotive division of the AGC Group, in this case AGC Automotive Czech, a.s. Chudeřice u Bíliny. This company produces toughened and laminated safety glasses, especially for private cars, lorries, buses and coaches, including the additional operations like application of encapsulated or extruded plastic profiles and application of required additional components (strips, pins, connectors, holders, etc.). AGC Automotive Czech produces and sells approx. 25 mill. of automotive glasses/windshields per year and so, it is one of the greatest and the most complex producers in Europe.

The company is a part of European group of producing, development and trade subjects of the AGC Automotive Europe Ltd. group. Its activities are concentrated in Belgium, Czech Republic, France, Italy, Hungary, Germany, Russia, Spain, Turkey and Great Britain. The company is a producer of more than 70 mill. of windshields, rear windows, sidescreens and skylights made of safety automotive glass per year. AGC Automotive Europe Ltd. is a part of the worldwide Automotive Glass Company, Asahi Glass Co. Ltd., Japan. The main vision is to be the most respected world supplier of all types of safety glass for the automotive industry.

In the Czech Republic there are many other companies processing flat glass for various specialized products. It is for instance SAINT-GOBAIN GLASS SOLUTION, s.r.o. - production of insulation glass, treatment of glass for the building industry and interiors; Saint-Gobain Sekurit ČR, spol. s r.o. Hořovice - production of glass for private cars; Pilkington Czech, spol. s r.o. Noviny pod Ralskem - production of glass for the building industry; Amirro, s.r.o. Čelákovice - production of mirrors and furniture glass; ERTL GLAS, s.r.o. Říčany - production of laminated safety glass, heat protective glass; WMA-Glass, s.r.o. Chrastava - production of insulation glass; Bepof, spol. s r.o., Hranice u Aše - processing of flat glass and mirrors, etc.

Beside the above mentioned companies there are also many wholesale companies trading with products and services regarding finished flat glass.

Container glass

The production of container glass includes beverage bottles and preserve glass jars made for the food industry (beer, wine, liquors, non-alcoholic drinks, mineral waters, fruit, etc.), and further on, glass containers for products of the chemical, pharmaceutical and cosmetic industries.

Dominant producers of container glass in the Czech Republic are O-I Manufacturing Czech Republic, a.s. with trading company O-I Sales and Distribution Czech Republic, s.r.o. Dubí u Teplic, members of the transnational group of companies Owens-Illinois, USA, and VETROPACK MORAVIA GLASS, a.s. Kyjov, a member of the transnational group Vetropack Holding AG, Switzerland. Both these companies have about 80 % of a market share of container glass in the Czech Republic and they have also important export shares in neighbouring countries within their transnational ownership and trade bonds.

Further on, there are producers of container glass, e.g. SKLÁRNY MORAVIA, a.s. Úsobrno and STÖLZLE UNION, s.r.o. Heřmanova Huť (the owner is Stölzle - Oberglas GmbH) in the Czech Republic.

Glass fibres and products made of

The only producer of glass textile fibres and products made of in the Czech Republic is SAINT-GOBAIN ADFORS CZ, s.r.o. Litomyšl, which is organizationally included to the sector of innovative materials of the Saint-Gobain group. As far as products it includes activities: “Vetrotex” and “ADFORS CONSTRUCTION PRODUCTS EUROPE”. The term “CONSTRUCTION PRODUCTS” reflects the final utilization of company products.

The only Czech producer of thermal and sound insulation made of glass fibres in the form of mats and slabs (ROTAFLEX SUPER® trade mark) is Union Lesní Brána, a.s. Dubí u Teplic.

Insulation material based on glass wool in the form of slabs and rolls is produced by KNAUF INSULATION, spol. s r.o. Krupka u Teplic. The plant in Krupka is one of the most up-to-date production plants for the production of mineral insulation made of glass wool in Europe.

Utility glass

There are about thirty companies with more than 20 employees with the main production of utility glass. Crystalex CZ, s.r.o. Nový Bor (machine made utility soda potassium glass), Crystal BOHEMIA, a.s. Poděbrady (lead crystal) and CRYSTALITE BOHEMIA, a.s. Světlá nad Sázavou belongs to the greatest. Further on, there are many smaller companies with various assortments, e.g. art glass, cut lead crystal, utility glass decorated with painting, pen-and-ink drawing, staining, high enamel and engraving, handmade utility glass, historical replicas, off-hand glass, etc. For example: Ajeto, s.r.o. Lindava, Rückl CRYSTAL, a.s. Nižbor, Blažek Glass, s.r.o. Poděbrady, CAESAR CRYSTAL BOHEMIAE, a.s. Světlá nad Sázavou, SKLÁRNA SLAVIA, s.r.o. Nový Bor, Královská Huť, s.r.o. Doksy, EGERMANN, s.r.o. Nový Bor, BOHEMIA MACHINE, s.r.o. Světlá nad Sázavou, and a number of other companies. Luxury handmade utility glass is produced by MOSER, a.s. Karlovy Vary. The pressed-and-blown decorated utility and decorative glass is produced by STÖLZLE UNION, s.r.o. KAVALIERGLASS, a.s. Sázava nad Sázavou is a producer of household cooking glass.

Other glass

Products included into this group of the glass industry are often (especially in abroad) called special glasses. It is a wide range of glass products with specifically defined properties having their customers mostly in other processing branches of industrial market. The assortment of this group is very wide in the Czech Republic. It includes technical, laboratory and laboratory apparatus glass, technical spheres, glass industrial apparatuses, protective welding glass, optical glass. Also the production of glass blocks, fashion jewellery semiproducts and lighting glass are included.

A dominant Czech producer of technical and laboratory glass, tubing and apparatus glass made of borosilicate glass is KAVALIERGLASS, a.s. Sázava. Technical and laboratory glass is also produced by TECHNOSKLO, s.r.o. Držkov, EXATHERM, s.r.o. Železný Brod (glass thermometers and densimeters), Detesk, s.r.o. Železný Brod (technical borosilicate glass), Vitrum, spol. s r.o. - Sklárna Janov, Janov nad Nisou and other smaller companies. From the producers of optical glass ECOGLASS, s.r.o. Jablonec nad Nisou, the producer of exactly pressed components of optical glass for electro-optical apparatuses, can be stated. VITRABLOK, s.r.o. Duchcov is a producer of glass blocks for the building industry. Frits and glazes are made in MEFRIT spol. s r.o. Mělník and Glazura, spol. s r.o. Roudnice. Production of fashion jewellery semiproducts is a subject of activities of many companies mostly in the north part of the Czech Republic in Jablonec region (Preciosa, a.s., LIGLASS, a.s., PAS Jablonec, a.s.). Lighting glass is produced by Sklárna Janštejn, s.r.o. and it is a supplementary assortment of several smaller producers of utility and technical glass. A number of companies are engaged in the production of components for chandeliers and also in individual production of chandeliers, the most significant are, e.g. Preciosa, a.s., LIGLASS, a.s.

Household china and ceramics

The assortment of household china includes not only products intended for daily use but also luxury products, e.g. luxury household china, household and decorative china, for instance rose, onion pattern, and figural china.

Among significant china producers belong Thun 1794, a.s. Nová Role, Český porcelán, a.s. Dubí u Teplic, G. Benedikt Karlovy Vary, s.r.o., Rudolf Kämpf, s.r.o. Nové Sedlo, König-Porzellan Sokolov, spol. s r. o. Sokolov, and Bohemia porcelán Moritz Zdekauer, a.s. Karlovy Vary - Stará Role.

A great number of more specialized smaller companies produce household ceramics. The greatest are KERAMO Kožlany, v.d., and Keramika Krumvíř, spol. s r.o. Krumvíř. Ceramic tiles are made in KERAMIA, s.r.o. Znojmo.

Technical ceramics and sanitary ware

There are two dominant Czech producers of sanitary ware – LAUFEN CZ, s.r.o. (with producing facilities in Bechyně and Znojmo), a member of the Roca and Ideal Standard, s.r.o. Teplice. Both companies are strongly oriented to export and their market success is dependent in a great extent on the building industry boom in Europe.

The producers of technical china are Elektroporcelán, a.s. Louny with the assortment of insulators for the energy industry, Jizerská porcelánka, s.r.o. Desná v Jizerských horách producing laboratory chinaware and china tubing, and ELPOR-Rauschert, s.r.o. Krupka Bohosudov.

From the producers of technical ceramics can be stated: TECHNICKÁ KERAMIKA, a.s. Hradec Králové - production technical oxide ceramics for the electrotechnical industry, machinery and chemical industry, etc., KERAMTECH, spol. s r.o. Žacléř - production of foundry ceramics and technical china, BRISK TÁBOR, a.s. - production spark and glow plugs for internal combustion engines and technical ceramics, HOFMAN CERAMIC CZ, s.r.o. Bělá nad Radbuzou - production of technical ceramics for foundries, ESTCOM CZ-oxidová keramika, a.s. Louny - production of refractory ceramics and ceramic tubes, and Diamorph Hob Certec, s.r.o. Horní Bříza - production of technical ceramics, etc.

Other mineral products

Aluminosilicate fibres resistant to high temperatures and insulating fibre products (wool, mats, shaped pieces, slabs) with SIBRAL trade mark used mainly in the construction of heat appliances are produced by UNIFRAX, s.r.o. Dubí u Teplic.

Fused basalt products (abrasion resistant and refractory materials with EUROR trade mark), abrasion resistant piping, and tiles for industry and interiors are produced in EUTIT, s.r.o., Stará Voda. This company is the only world producer of interior floor basalt tiles.

Furnaces/kilns, glass machinery and equipment, and special services for glass and ceramic industry

Nowadays, about forty or fifty independent companies produce and deliver glass furnaces, kilns, machinery and equipment, glass moulds and apparatuses for the glass and ceramic production, or carry out service, design and various specialized and consultancy work for this industry. These companies are of a different size and they have, of course, various ranges of their activities.

Among the companies with individual production and trade activities exceeding significantly the territory of the Czech Republic belong some producers of machinery and equipment, e.g. Sklostroj Turnov CZ, s.r.o. producing machines and equipment for automatic production of container glass. Further on, SKLOPAN LIBEREC, a.s. is a supplier of machinery for processing of flat glass, SKLÁŘSKÉ STROJE ZNOJMO, s.r.o. delivers various glass machinery equipments, and TRIMA, s.r.o. Turnov delivers machinery and equipment for the production and processing of glass fibres.

Heat appliances and kilns for china and ceramics firing, as a complex and in greater amount, are designed and delivered by REALISTIC, a.s. Karlovy Vary, BVD PECE, s.r.o. Karlovy Vary, and LAC, s.r.o. Rajhrad. The company Elsklo, s.r.o. Desná v Jizerských horách designs and delivers equipment for small-scale electric melting of glass. Glass melting aggregates are designed and delivered by Teplotechna - Prima, s.r.o. Teplice. Companies GLASS SERVICE, s.r.o.

Vsetín and DITES, s.r.o. Teplice (automatized control systems for technological processes) have important activities in abroad in the area of design and control systems for glass melting aggregates. Gas-fired melting furnaces and auxiliary furnaces for hand production of glass are produced by EGT servis, s.r.o. Hradec Králové.

Producers and suppliers of cast iron and steel moulds for utility and lighting glass - Brnoform, s.r.o. Brno, and for container glass SKLOFORM, a.s. Suchdol nad Lužnicí - work predominantly on the level of services and deliveries for Czech producers. Further on, Desko, a.s. Desná v Jizerských horách delivers machinery and moulds for fashion jewellery production. Other producers of machinery for the production of glass are, e.g. FOR G, s.r.o. Teplice, and BOHEMIA MACHINE, s.r.o. Světlá nad Sázavou.

Quite a great group of companies and also a number of independent individuals are dealing with design of procedures and construction of machinery for mechanical working of glass (engraving, cutting, polishing), e.g. DIAS TURNOV, s.r.o. and POLPUR, s.r.o. Turnov.

Raw materials for the glass and ceramic industry

A long tradition and the development of glass, china and ceramic production were determined, beside other factors, by an abundance of basic raw materials, i.e. sand, kaolin, feldspar and quartz.

High quality glass sands with extremely high content of SiO_2 are outstanding for the glass industry and also for various utilizations in other branches. Sands are delivered in a moistened or dried form. Companies Provodínské písky, a.s. Provodín and Sklopísek Střeleč, a.s. Mladějov v Čechách mine and deliver these sands in the Czech Republic.

Mining and processing of kaolin is carried out by LB MINERALS, s.r.o. Horní Bříza, Sedlecký kaolin, a.s. Božičany, and Kaolin Hlubany, a.s. Podbořany. LB MINERALS, s.r.o. is a supplier of ceramic kaolins intended for wall and floor tiles and sanitary ware, mixed kaolins for sanitary ware, paper mills kaolins and kaolins for glass fibres. Floated kaolin delivered by Sedlecký kaolin, a.s. is used, especially for china and ceramics. Kaolin Hlubany, a.s. delivers floated kaolins for ceramics.

Beside mining and processing of kaolins also mining and processing of feldspar is a part of the production of the LB MINERALS, s.r.o. Potassium feldspars are suitable for production of container and flat glass, glazes and china; soda-lime feldspars are suitable for the production of frits and enamels. Soda-potassium and potassium-sodium feldspars are delivered by K M K GRANIT, a.s. Krásno. Feldspars are applied as flux.

3. POSITION OF THE GLASS AND CERAMIC INDUSTRY IN THE CZECH REPUBLIC

The glass and ceramic industry is a traditional part of the processing industry in the Czech Republic.

The glass and ceramic industry is included in the subcategory Production of other non-metallic mineral products according to the Classification of Economic Activities (NACE) used by the European Union.

The CZ-NACE 23 Production of other non-metallic mineral products put together productions of glass, ceramics and building materials of various types and utilization. Production of these commodities has a long tradition and a high level in the Czech Republic.

Classification of CZ-NACE activities is the following:

- 23.1 Production of glass and glass products
- 23.2 Production of refractory products
- 23.3 Production of building materials from clay materials
- 23.4 Production of other china and ceramic products
- 23.5 Production of cement, lime and plaster
- 23.6 Production of concrete, cement and plaster products
- 23.7 Cutting, shaping and finishing of stones
- 23.9 Production of abrasive materials and other non-metallic mineral products not stated elsewhere

Sections 23.1 and 23.4 from which:
23.41 Production of ceramic and china products, mostly for household and decorative products
23.42 Production of ceramic sanitary ware
23.43 Production of ceramic insulators and insulation accessories
23.44 Production of other technical ceramic products
represent the production of glass, glass products and production of other china and ceramic products which are a subject of evaluation of this Annual Report.

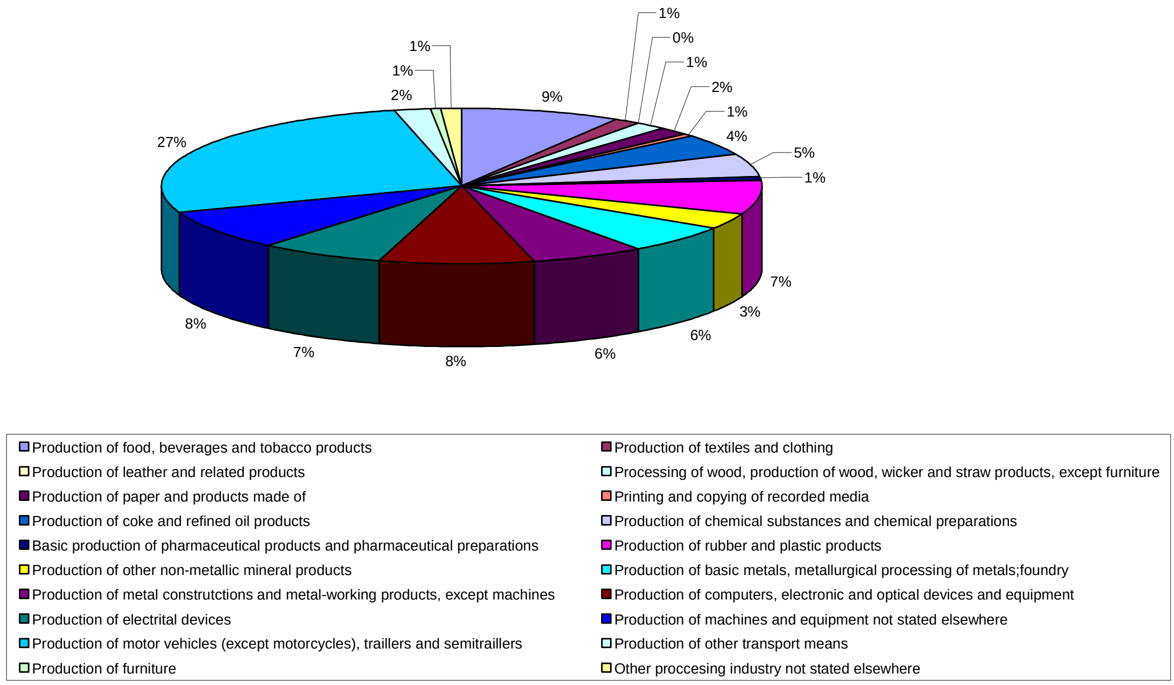
In the following tables the revenues without the value added tax (VAT) from sale of own products and services of industrial character (hereinafter revenues) and revenues without the VAT from the direct export (hereinafter direct export) of individual subcategories of the processing industry. Revenues and direct export are given in current prices. Revenues and direct export are given without the CZ_NACE 33 Repair and installation of machines and equipment.

The revenues of the processing industry in the Czech Republic reached a value of 2856.29 bill.CZK in 2013 (in 2012 it was 2815.49 bill.CZK). In comparison with the previous year the revenues of the processing industry increased by 1.4 %. The revenues in amount of 94.13 bill.CZK in the category Production of other non-metallic mineral products mean an increase by 1.3 % in comparison with 2012. The Production of other non-metallic mineral products shared on revenues of the processing industry with 3.3 % in 2013.

Revenues of the processing industry in 2013

	Revenues (bill. CZK)	Share (%)
Production of food, beverages and tobacco products	243.57	8.5
Production of textiles and clothing	41.65	1.5
Production of leather and related products	3.48	0.1
Processing of wood, production of wood, wicker and straw products, except furniture	41.62	1.5
Production of paper and products made of	51.43	1.8
Printing and copying of recorded media	17.66	0.6
Production of coke and refined oil products	120.33	4.2
Production of chemical substances and chemical preparations	139.36	4.9
Basic production of pharmaceutical products and pharmaceutical preparations	27.01	0.9
Production of rubber and plastic products	195.90	6.9
Production of other non-metallic mineral products	94.13	3.3
Production of basic metals, metallurgical processing of metals; foundry	164.42	5.8
Production of metal constructions and metal-working products, except machines and equipment	175.71	6.2
Production of computers, electronic and optical devices and equipment	239.75	8.4
Production of electrical devices	192.14	6.7
Production of machines and equipment not stated elsewhere	237.72	8.3
Production of motor vehicles (except motorcycles), trailers and semitrailers	768.10	26.9
Production of other transport means	51.80	1.8
Production of furniture	15.37	0.5
Other processing industry not stated elsewhere	35.14	1.2
Processing industry	**2 856.29**	**100.0**

Structure of revenues of the processing industry in 2013

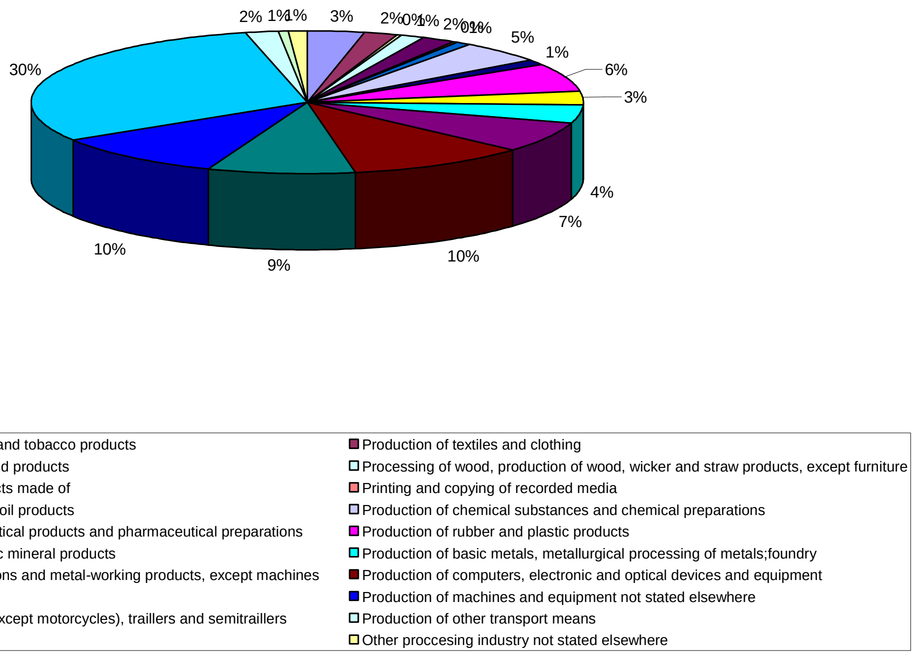


The direct export of the processing industry was 1725.47 bill. CZK, i.e.by 3.9 % more than in 2012 (1661.42 bill.CZK).

Direct export of the processing industry in 2013

	Revenues (bill. CZK)	**Share (%)**
Production of food, beverages and tobacco products	59.69	3.5
Production of textiles and clothing	31.20	1.8
Production of leather and related products	2.91	0.2
Processing of wood, production of wood, wicker and straw products, except furniture	25.64	1.5
Production of paper and products made of	31.63	1.8
Printing and copying of recorded media	6.43	0.4
Production of coke and refined oil products	15.48	0.9
Production of chemical substances and chemical preparations	84.44	4.9
Basic production of pharmaceutical products and pharmaceutical preparations	22.03	1.3
Production of rubber and plastic products	111.09	6.4
Production of other non-metallic mineral products	49.08	2.8
Production of basic metals, metallurgical processing of metals; foundry	73.76	4.3
Production of metal constructions and metal-working products, except machines and equipment	119.90	6.9
Production of computers, electronic and optical devices and equipment	180.26	10.4
Production of electrical devices	149.00	8.6
Production of machines and equipment not stated elsewhere	177.51	10.3
Production of motor vehicles (except motorcycles), trailers and semitrailers	522.08	30.3
Production of other transport means	32.79	1.9
Production of furniture	9.24	0.5
Other processing industry not stated elsewhere	21.31	1.2
Processing industry	**1 725.47**	**100.0**

Structure of direct export of the processing industry in 2013



In the following table the individual processing industry subcategories are arranged according to the level of the inter-year change of revenues reached within years 2013 and 2012. These inter-year changes are used here as indicators of growth dynamism of individual branches.

Dynamism of sale according to the individual processing industry subcategories

	Revenues 2012 (bill. CZK)	Revenues 2013 (bill. CZK)	Index13/12 (%)
Production of leather and related products	2.50	3.48	139.2
Other processing industry not stated elsewhere	31.34	35.14	112.1
Production of computers, electronic and optical devices and equipment	215.19	239.75	111.4
Production of other transport means	47.53	51.80	109.0
Production of metal constructions and metal-working products, except machines and equipment	165.59	175.71	106.1
Processing of wood, production of wood, wicker and straw products, except furniture	39.32	41.62	105.8
Production of machines and equipment not stated elsewhere	228.09	237.72	104.2
Production of electrical devices	187.33	192.14	102.6
Production of paper and products made of	50.12	51.43	102.6
Production of textiles and clothing	40.76	41.65	102.2

Processing industry	**2 815.49**	**2 856.29**	101.4
Production of food, beverages and tobacco products	240.49	243.57	101.3
Production of other non-metallic mineral products	92.88	94.13	101.3
Production of rubber and plastic products	194.05	195.90	101.0
Basic production of pharmaceutical products and pharmaceutical preparations	26.80	27.01	100.8
Production of furniture	15.29	15.37	100.5
Production of motor vehicles (except motorcycles), trailers and semitrailers	773.69	768.10	99.3
Production of chemical substances and chemical preparations	141.05	139.36	98.8
Production of basic metals, metallurgical processing of metals; foundry	170.85	164.42	96.2
Production of coke and refined oil products	133.02	120.33	90.5
Printing and copying of recorded media	19.60	17.66	90.1

The most significant growth was in the category Production of leather and related products, followed by the Other processing industry, not stated elsewhere and the Production of computers, electronic and optical devices and equipment.

The revenues of the category Production of other non-metallic mineral products, to which also the industry of glass and ceramics belongs, increased by 1.3 % in comparison with 2012 what means a significant improvement in comparison with decrease by 3.6 % between 2012 and 2011.

Glass and ceramic industry

In the following chapter “Development of the glass and ceramic industry in the period from 2008 till 2013”, the glass and ceramic industry as a part of the Czech processing industry, which corresponds to the characteristic orientation of organizations activities included in the Association, is studied and described in more details, i.e. in group division. For understanding the relations among the processing industry, production of other non-metallic mineral products and the glass and ceramic industry an informative table is given further on.

Glass and ceramic industry in the processing industry in 2013

	Revenues	**Direct export**
Glass and ceramic industry		
Indicators in bill. CZK (current prices)	38.90	30.67
Share in the Other non-metallic mineral products (%)	0.41	0.62
Share in the processing industry (%)	1.36	1.78
Production of the other non-metallic mineral products		
Indicators in bill. CZK (current prices)	94.13	49.08
Share in the processing industry (%)	3.30	2.84
Processing industry		
Indicators in bill. CZK (current prices)	2856.29	1725.47

The revenues of the glass and ceramic industry in 2013 in comparison with 2012 increased by 1.64 bill.CZK, i.e. by 4.4 %, from which the direct export increased by 3.28 bill. CZK, i.e. by 12.0 %. Both indicators grew more rapidly than in the whole category Production of other non-metallic mineral products, i.e. revenues grew by 3.1 percentual point and direct export by 1 percentual point.

4. DEVELOPMENT OF THE GLASS AND CERAMIC INDUSTRY IN THE PERIOD FROM 2008 TILL 2013

In this part of the Annual Report characteristic values of the main production indices of the glass and ceramic industry of the Czech Republic in 2013 and in the period from 2008 till 2013 are recorded. In the context of real outer and inner background of the Czech Republic, based on these data, the aim is to analyze and describe the main trends of the development of economic indices of the glass and ceramic industry in above-mentioned years.

In the introduction of the glass and ceramic industry development analysis a survey of basic macroeconomic indices for the Czech Republic in the investigated period from 2008 till 2013 is given for understanding wide relations.

Table: Main macroeconomic indices in the Czech Republic in the period from 2008 till 2013
(Source: Czech Statistical Office, July 2014)

		2008	2009	2010	2011	2012	2013
Gross domestic product	growth in %, actually	3.1	-4.5	2.5	1.8	-1.0	-0.9
Average inflation rate	growth in %, actually	6.3	1.0	1.5	1.9	3.3	1.4
Unemployment rate *	average in %	x	x	7.3	6.7	7.0	7.0
Average real wage growth	in %	1.4	2.3	0.7	0.6	-0.8	-1.4
Balance of trade	bill. CZK	86.1	67.8	124.5	191.4	310.8	350.8
CZK / EUR	average per year	24.94	26.44	25.29	24.59	25.14	25.97
CZK / USD	average per year	17.03	19.06	19.11	17.69	19.58	19.56

* (Selection of labour force investigation)

The year 2014 left its mark on the Czech economy with a continuing recession, i.e. the inter-year decline of the gross domestic product by 0.9 % like in 2012. The expenditures to the final consumption grew slightly but the decline of investments continued. The foreign trade also projected to the decrease of the gross domestic product with an inter-year worsening of import and export balance from the 1st and 3rd quarter. During 2013 the output of economy improved step-by-step. The inter-year declines in the first three quarters moderated (from -2.2 % over -1.6 % even to -1 %) and in last three months of the year the gross domestic product increased by 1.3 % in comparison with the same period. In spite of an unfavourable development of real wages during the year the rate of expenditures to the final consumption of households increased step-by step, from the decline in the first half of the year to 0.7 % in the 4th quarter in comparison with previous year. The output of the branch according to the gross added value decreased in the whole economy by 0.8 %. However, the industry significantly strengthened in the 4th quarter (by 3 %). Intensive utilization of "nonstandard" forms of jobs continued on the labour market what helped to the growth of total employment.
(Source: Czech Statistical Office, Vývoj ekonomiky České republiky v roce 2013, March 2014)

The glass and ceramic industry included in the branch Production of other mineral products is incorporated to the competence of the Ministry of Industry and Trade.

A reduced demand impacted also to the output of the branch in the competence of the Ministry of Industry and Trade. The stimulation growing stronger step-by-step during the year, projected favourably in the annual results not only in the industry, incl. its export output, but also in sales on the domestic market. Only the building industry continued in the decline. Mainly the production of automobiles (and related branches), which profit on stimulation in Eurozone, especially in Germany, and improving situation on European automobile market, played an important role in return of industrial production to the growth 0.5 %. The building industry was worse off by 6.7 % in comparison with previous year and extended the period of its decline up to five years. Further weakening of demand for building works, especially of public sector, became evident in bad output of the branch, while the decline of employment further decrease available capacities. The foreign trade reached (according to data of cross-border statistics) a record surplus of balance of trade in amount of 351 bill. CZK. These results confirmed again a strong dependence on the European Union countries, when 81 % of Czech export was directed to these grouping. In the structure of goods a dominant position holds export of machines and travel means the share of which on total export reached almost 54 %.
(Source: Ministry of Industry and Trade, Analýza vývoje ekonomiky České republiky za rok 2013, March 2014)

Data and analyses given below were gathered and processed for the glass and ceramic industry as the area of the Czech processing industry corresponding to the characteristic orientation of companies associated in the Association. The selected method of the industrial development description comes out from investigation of data arranged in individual branches of the glass and ceramic industry. For the analysis of 2013 available statistical data of companies with more than 50 employees relevant to 30 June 2014, have been used.

Price indices for the group of products of the glass and ceramic industry

Table: Inter-year price indices

REPR*		2008	2009	2010	2011	2012	2013
CG 23	Other non-metallic mineral products	102.4	98.0	97.3	99.6	100.2	99.6
CG 231	Glass and glass products	98.1	93.6	97.9	101.5	99.4	99.7
CG 232	Refractory products	103.3	102.9	97.7	101.2	102.1	101.1
CG 234	Other china and ceramic products**						

* Representative for consumer prices determination
** The Czech Statistical Office has not published price indices for CG 234
Inter-year price indices (same period of previous year = 100 %)

The total average price index of the Other non-metallic mineral products group decreased by 0.6 of a percentual point in comparison with previous year.

Table: Cumulative price indices

REPR*		2008	2009	2010	2011	2012	2013
CG 23	Other non-metallic mineral products	102.4	100.4	97.7	97.3	97.5	97.1
CG 231	Glass and glass products	98.1	91.8	89.9	91.2	90.7	90.4
CG 232	Refractory products	103.3	106.2	103.8	105.0	107.3	108.4
CG 234	Other china and ceramic products**						

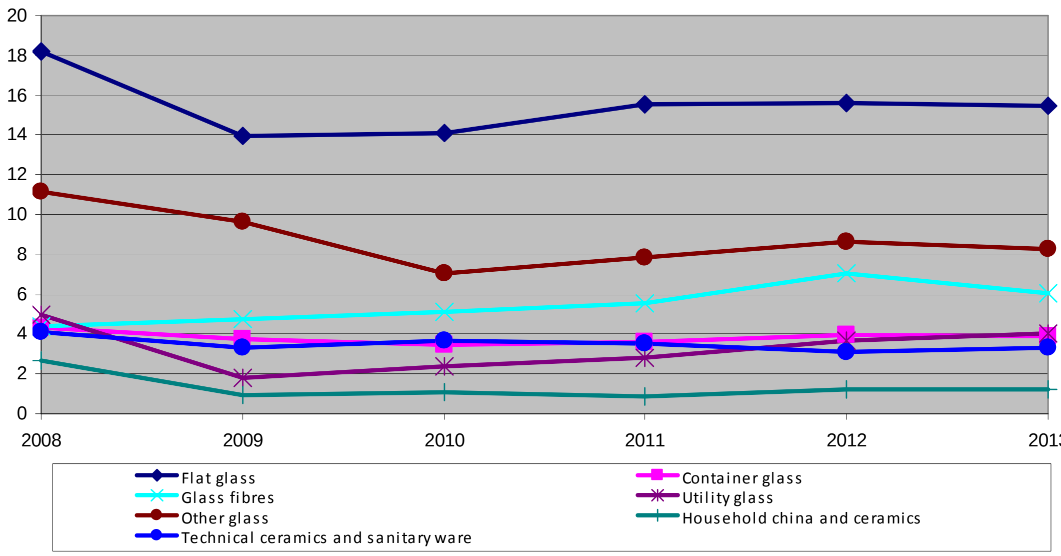
* Representative for consumer prices determination
** The Czech Statistical Office has not published price indices for CG 234.
Cumulative price indices (2007 = 100 %)

Revenues for sale of own products and services

Table: Revenues for sale of own products and services (bill. CZK)

	2008	2009	2010	2011	2012	2013	index 13/12 (%)
Flat glass	18.17	13.96	14.09	15.56	15.64	15.46	98.8
Container glass	4.33	3.71	3.42	3.61	3.96	3.90	98.5
Glass fibres	4.39	4.74	5.11	5.52	7.06	6.02	85.3
Utility glass	5.00	1.78	2.34	2.77	3.66	4.03	110.1
Other glass	11.14	9.63	7.05	7.86	8.63	8.28	95.9
Glass, total	43.03	33.82	32.01	35.32	38.95	37.69	96.8
Household china and ceramics	2.66	0.93	1.06	0.84	1.19	1.22	102.5
Technical ceramics and sanitary ware	4.12	3.32	3.65	3.55	3.07	3.31	107.8
Ceramics, total	6.78	4.25	4.71	4.39	4.26	4.53	106.3
Glass and ceramics, total	**49.81**	**38.07**	**36.72**	**39.71**	**43.21**	**42.22**	**97.7**

Graph: Development of revenues for sale of own products and services (bill. CZK)



In 2013 the revenues for sales of own products and services (hereinafter revenues) reached in investigated branches 42.22 bill. CZK, i.e. by 2.3 % (0.99 bill. CZK) less than in 2012. The revenues of the glass industry reached 37.69 bill. CZK, what is by 3.2 % (1.26 bill. CZK) less than in 2012. The revenues decreased in all glass industry branches, except of utility glass. The share of flat glass was 41.0 %, other glass 22.0 %, glass fibres and products made of 16.0 %, container glass 10.3 %, and utility glass 10.7 %.

The revenues of investigated branches of china and ceramics reached 4.53 bill. CZK, what is by 6.3 % (0.27 bill. CZK) more than in 2012. The share of household china and ceramics was 26.9 %, the share of technical ceramics and sanitary ware was 73.1 %.

The development of revenues in 2013 in individual branches was the following.

The revenues for flat glass in 2013 were 15.46 bill. CZK. In comparison with 2012 it decreased by 1.2 %. The flat glass production is dependent on the development of the building and automotive industry.

The building industry in the Czech Republic reached the peak of its prosperity in 2008 and it has been decreasing since that year. The production in the building construction has been decreasing already since 2008, while in the civil engineering the decline appeared two years later. The index of building production recorded an inter-year decrease by 6.7 % in 2013. The building companies realized building works in amount of 397.5 bill. CZK in 2013. The most of building works were realized in new constructions, reconstructions a modernization (71.4 %), approximately one quarter was in repairs and maintaining (26.1 %) and 2.5 % of building production was realized in abroad.
(Source: Czech Statistical Office, Jak se daří českému stavebnictví, July 7, 2014)

The Czech automotive industry showed its competitiveness even in complicated conditions of 2013. In spite of production decline in comparison with 2012 it reached the third historically greatest production of motor cars. In 2013 there were made 1154,678 pieces of highway vehicles in the Czech Republic.
(Source: Automotive Industry Association)

The development of flat glass in following years will be influenced mainly by further development of the building industry in Central Europe and by the production of automobile industry.

The revenues for container glass reached amount of 3.90 bill. CZK in 2013, i.e. it decreased by 1.5 % (0.06 bill. CZK) in comparison with 2012. The decline of revenues was influenced by decreased demand not only at home, but also by decreased demand for glass bottles, especially for beverages, in abroad.

The revenues for glass fibres and products made of decreased by 14.7 % (1.04 bill. CZK) in comparison with previous year. The decline in the building industry in the Czech Republic projected very negatively to the revenues. On the other side the export of this assortment to abroad, mainly to the European Union, Russia and Ukraine grew.

Since 2011 the revenues for utility glass have been increasing. In comparison with 2012 the revenues of utility glass increased by 10.1 % (0.37 bill. CZK). The export is decisive for the amount of revenues. In this branch there is a very hard competition and Czech companies face it by a high quality, design and originality of products. It is possible to say that companies and their products in the world since 2011 have been strengthening their position.

The revenues for other glass decreased in comparison with 2012 by 4.1 % (0.65 bill. CZK). This group includes a wide assortment of products (technical and laboratory glass, glass tiles and bricks, glass semiproducts for fashion jewellery, etc.). The revenues development of individual assortment groups is very unbalanced. The decline of the glass semiproducts for fashion jewellery export, which decreased approx. by 0.29 bill. CZK in comparison with 2012, projected significantly to the decrease of revenues for other glass.

The revenues for household china and ceramics increased by 2.5 % (0.03 bill. CZK) in comparison with the previous year. The china producers succeeded to conclude necessary amount of trade contracts thanks to a consistent trade policy.

The revenues for technical ceramics and sanitary ware increased by 7.8 % (0.24 bill. CZK), from which the revenues for sanitary ware increased by 10.9 % (0.27 bill. CZK). On the other side the revenues for technical ceramics decreased by 5.5 % (0.03 bill. CZK).

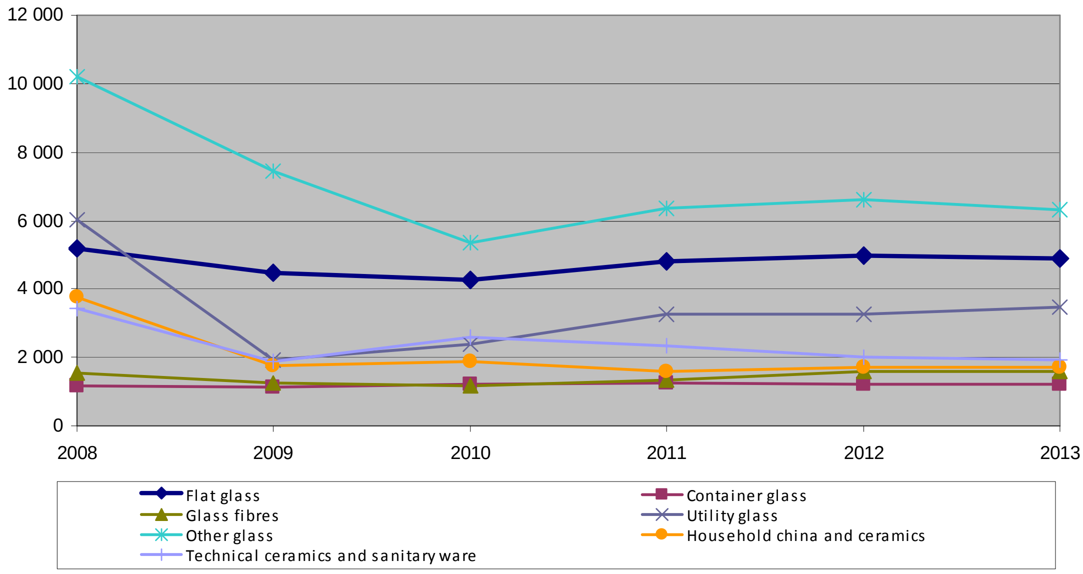
Workers

Table: Average accounting number of workers (persons)

	2008	2009	2010	2011	2012	2013	index 13/12 (%)
Flat glass	5 175	4 453	4 256	4 817	4 975	4 911	98.7
Container glass	1 150	1 143	1 202	1 247	1 221	1 208	98.9
Glass fibres	1 529	1 259	1 188	1 319	1 569	1 593	101.5
Utility glass	6 020	1 931	2 402	3 254	3 276	3 472	106.0
Other glass	10 206	7 447	5 361	6 340	6 598	6 320	95.8
Glass, total	24 080	16 233	14 409	16 977	17 639	17 504	99.2
Household china and ceramics	3 749	1 751	1 900	1 571	1 702	1 725	101.4
Technical ceramics and sanitary ware	3 411	1 885	2 576	2 351	1 988	1 915	96.3
Ceramics, total	7 160	3 636	4 476	3 922	3 690	3 640	98.6
Glass and ceramics, total	**31 240**	**19 869**	**18 885**	**20 899**	**21 329**	**21 144**	**99.1**

Total workers number in the glass and ceramic industry stated in 2013 in comparison with 2012, decreased by 0.9 %, from which the glass industry showed a decrease by 0.8 % (135 persons) and the ceramic industry decreased by 1.4 % (50 persons). The inter-year development of workers number differs in individual branches.

Graph: Development of average accounting number of workers (persons)



The workers number decline in flat glass production is a consequence of reduction the assortment of flat glass for the building industry. The workers number decreased by 64 persons.

The workers number in container glass stayed almost on the same level (decrease by 1.1 %). In the production of glass fibres and products made of the workers number increased by 1.5 %.

The increase of demand for the assortment of utility glass projected to the workers number increase in utility glass production (by 6.0 %).

The workers number decreased by 4.2 % in other glass production. The decrease of workers number is influenced by permanent decline of demand for glass semiproducts for fashion jewellery and reduction the assortment with prevailing share of manual work.

The increase of demand for the assortment of household china and ceramics production projected in the increase of the workers number (by 1.4 %) of this branch.

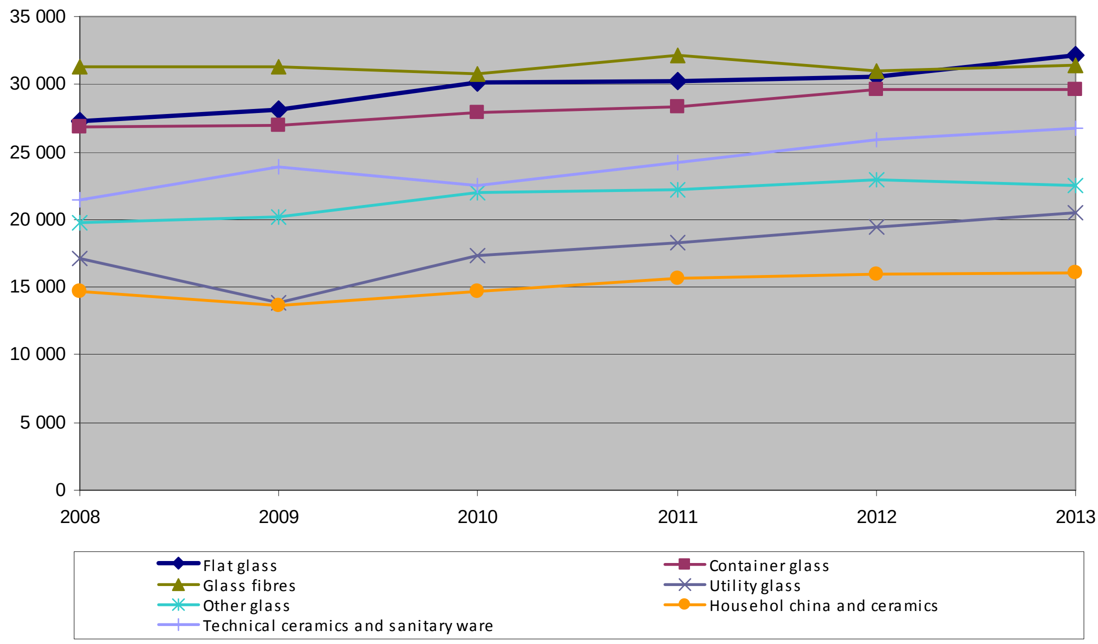
The workers number in technical ceramics and sanitary ware decreased by 3.7 %, from which the workers number in sanitary ware increased slightly and in technical ceramics production it decreased.

Average month-wages

Table: Average month-wages (CZK)

	2008	2009	2010	2011	2012	2013	index 13/12 (%)
Flat glass	27 271	28 172	30 113	30 214	30 537	32 164	105.3
Container glass	26 875	27 007	27 896	28 332	29 561	29 645	100.3
Glass fibres	31 351	31 351	30 783	32 104	31 033	31 355	101.0
Utility glass	17 120	13 828	17 300	18 333	19 499	20 498	105.1
Other glass	19 745	20 223	21 979	22 175	22 971	22 527	98.1
Household china and ceramics	14 650	13 602	14 698	15 680	16 018	16 066	100.3
Technical ceramics and sanitary ware	21 472	23 863	22 566	24 207	25 910	26 802	103.4
Glass and ceramics, total	**20 794**	**22 364**	**23 495**	**24 160**	**24 896**	**25 364**	**101.9**

Graph: Development of average month-wages (CZK)



The inter-year development of average month-wages within 2013 and 2012 documents the economic situation of glass and ceramic industry companies.

The average wages decreased only in the group of other glass in comparison with previous year. In remaining investigated production branches the wages either stagnated, or increased slightly.

More and more noticeable tendency in differentiation of wages continues. Significantly above the average wage in the Czech Republic (25,128 CZK; *Source: Czech Statistical Office*) there are average wages reached in the branches of glass fibres and products made of, flat glass (average wage in unfinished flat glass is 43,259 CZK), and container glass, the production of which is mass and practically full-automatized. Further on, it applies to branches with more often changes (shorter production series) in the regime of automatized production lines and also a certain share of manual production. Average wages in sanitary ware (30,450 CZK) and in processes related with shaping and glass processing (29,158 CZK) can be stated as an example. The level of the average wage in other glass is influenced on one side by strengthening the share of more qualified work (a group of production of technical glass), and low wages in the production of glass semiproducts for fashion jewellery on the other side. Average wages in utility glass and, especially, in household china stay deeply below the average wage in the Czech Republic.

Productivity of labour

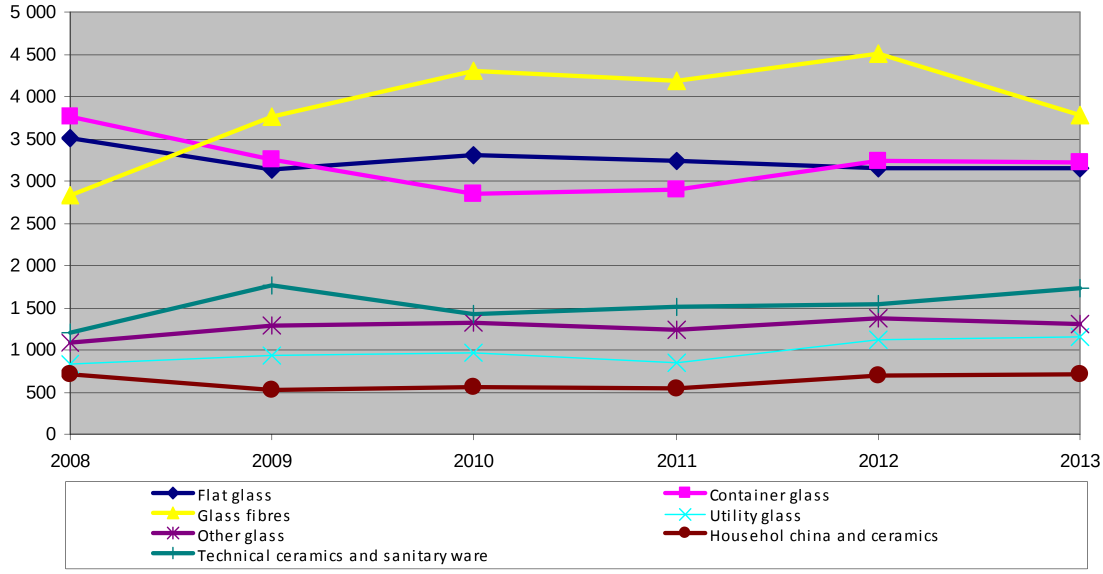
The above-mentioned information (development of revenues, workers number and production character) is projected in more complex index of the productivity of labour from sales. The productivity of labour of the glass and ceramic industry as the whole decreased by 1.4 %.

The productivity of labour in flat glass, and also in container glass, stagnated. The inter-year decline of revenues projected significantly to the decline of productivity of labour in glass fibres and products made of (12.1 %) and other glass (5.1 %). Productivity of labour increased slightly (1.0 %) in household china and ceramics production. The increasing share of automatized production of this assortment is projected to the growth of productivity of labour in utility glass (by 6.4 %). The productivity of labour increased the most significantly (11.8 %) in technical ceramics and sanitary ware, i.e. in both segments.

Table: Productivity of labour from sales in current prices (ths. CZK/worker)

	2008	2009	2010	2011	2012	2013	index 13/12 (%)
Flat glass	3 511	3 135	3 312	3 231	3 145	3 148	100.1
Container glass	3 765	3 251	2 845	2 895	3 242	3 223	99.4
Glass fibres	2 837	3 762	4 304	4 183	4 501	3 778	83.9
Utility glass	831	925	974	852	1 117	1 160	103.8
Other glass	1 092	1 293	1 315	1 240	1 380	1 310	94.9
Household china and ceramics	709	527	555	536	701	708	101.0
Technical ceramics and sanitary ware	1 208	1 759	1 417	1 511	1 547	1 730	111.8
Glass and ceramics, total	**1 595**	**1 915**	**1 945**	**1 900**	**2 026**	**1 997**	**98.6**

Graph: Development of productivity of labour from sales in current prices (ths. CZK/worker)



Export

The export is stated further on in revenues from direct export in current prices (hereinafter direct export) and total export (i.e. direct export, indirect export).

The development of direct export is given in the following table. The hollow glass production includes utility and container glass. Due to the statistical investigation it is not possible to divide hollow glass to above mentioned production branches.

Table: Direct export (bill. CZK)

	2008	2009	2010	2011	2012	2013	index 13/12 (%)
Flat glass	11.13	8.39	8.86	9.70	11.07	11.44	103.3
Hollow glass	4.39	3.41	3.75	4.82	5.11	5.32	104.1
Glass fibres	2.47	1.69	1.88	1.97	1.99	4.92	247.2
Other glass	7.28	6.62	6.14	6.48	7.10	6.74	94.9
Glass, total	25.27	20.11	20.63	22.97	25.27	28.42	112.5
Household china and ceramics	0.82	0.43	0.36	0.37	0.47	0.51	108.5
Technical ceramics and sanitary ware	3.26	1.88	2.26	2.13	1.65	1.74	105.5
Ceramics, total	4.08	2.31	2.62	2.50	2.12	2.25	106.1
Glass and ceramics, total	**29.35**	**22.42**	**23.25**	**25.47**	**27.39**	**30.67**	**112.0**

Graph: Development of direct export (bill. CZK)

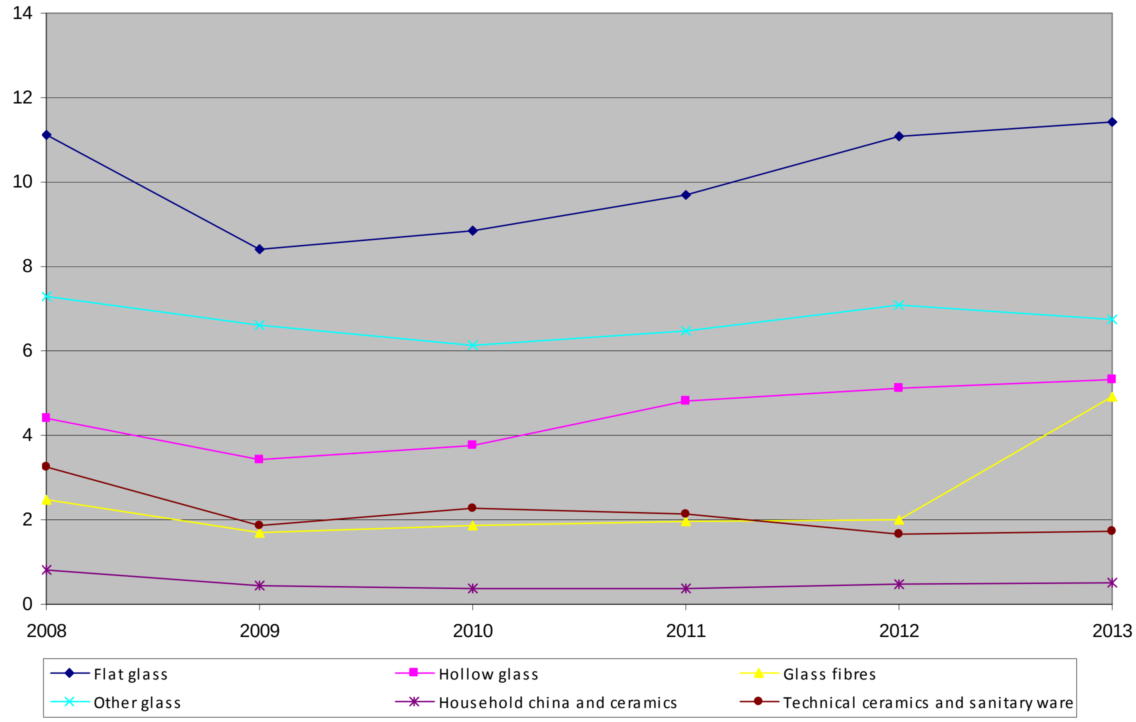
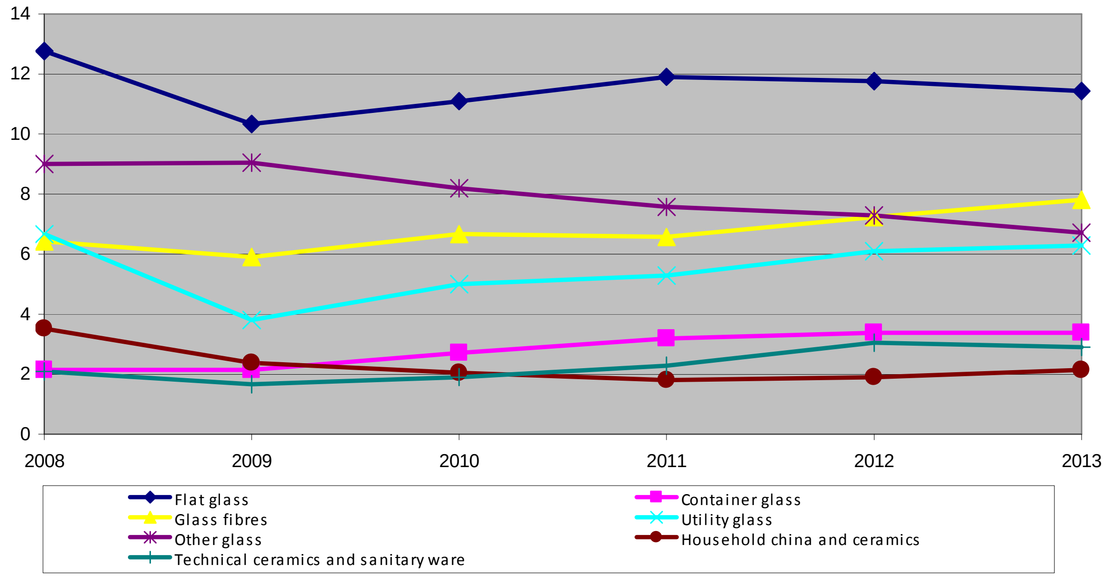


Table: Export (bill. CZK)

	2008	2009	2010	2011	2012	2013	index 13/12 (%)
Flat glass	12.774	10.325	11.112	11.923	11.757	11.450	97.4
Container glass	2.123	2.128	2.701	3.214	3.393	3.391	99.9
Glass fibres	6.436	5.904	6.665	6.568	7.240	7.786	107.5
Utility glass	6.685	3.805	5.010	5.291	6.112	6.298	103.0
Other glass	9.020	9.061	8.187	7.577	7.292	6.730	92.3
Glass, total	37.038	31.223	33.675	34.573	35.794	35.655	99.6
Household china and ceramics	3.518	2.395	2.065	1.789	1.921	2.137	111.2
Technical ceramics and sanitary ware	2.087	1.676	1.883	2.306	3.067	2.882	94.0
Ceramics, total	5.605	4.071	3.948	4.095	4.988	5.019	100.6
Glass and ceramics, total	**42.643**	**35.294**	**37.623**	**38.668**	**40.782**	**40.674**	**99.7**

Graph: Development of export (bill. CZK)



The glass and ceramic industry of the Czech Republic is oriented to export, i.e. it is directly influenced by economic changes in the world, especially in the European Union where 70.0 % of export of investigated production branches are directed.

After the decline of this branch export within years 2008 and 2009, the export has been increasing since 2010. In comparison with 2012, the direct export in 2013 increased by 12.0 % in comparison with previous year. The total export slightly decreased by 0.3 %. The direct export of investigated branches in 2013 was 30.67 bill. CZK, total export was 40.674 bill. CZK.

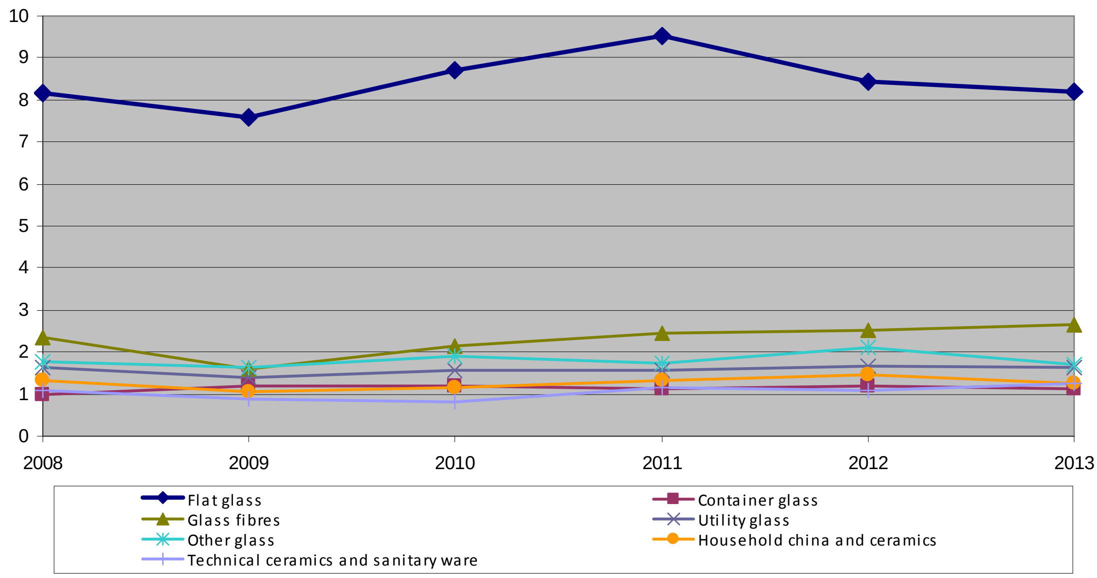
The export development in 2013 in individual branches is given in more details in Chapter 5 The analysis of export and import.

Import

Table: Import (bill. CZK)

	2008	2009	2010	2011	2012	2013	index 13/12 (%)
Flat glass	8.167	7.583	8.697	9.521	8.433	8.212	97.4
Container glass	0.979	1.186	1.184	1.125	1.203	1.129	93.8
Glass fibres	2.351	1.615	2.133	2.448	2.520	2.646	105.0
Utility glass	1.618	1.407	1.553	1.552	1.651	1.624	98.4
Other glass	1.761	1.637	1.905	1.747	2.123	1.693	79.7
Glass, total	14.876	13.428	15.472	16.393	15.930	15.304	96.1
Household china and ceramics	1.321	1.045	1.166	1.323	1.474	1.270	86.2
Technical ceramics and sanitary ware	1.104	0.895	0.801	1.163	1.076	1.245	115.7
Ceramics, total	2.425	1.940	1.967	2.486	2.550	2.515	98.6
Glass and ceramics, total	**17.301**	**15.368**	**17.439**	**18.879**	**18.480**	**17.819**	**96.4**

Graph: Import development (bill. CZK)



The total import of the glass and ceramic industry products has been decreasing since 2011. In 2013 it decreased in comparison with previous year by 3.6 % (0.661 bill. CZK). Only the import of glass fibres and products made of and technical ceramics and sanitary ware increased.

The import development in individual production branches in 2013 is given in more details in Chapter 5 The analysis of export and import.

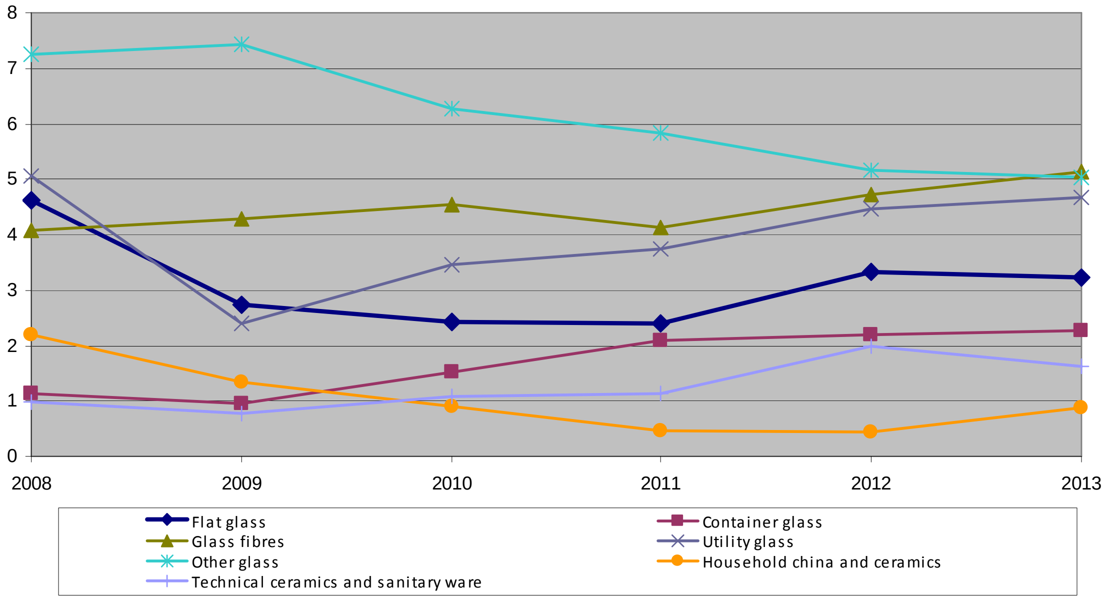
Balance of foreign trade

Table: Balance of foreign trade (bill. CZK)

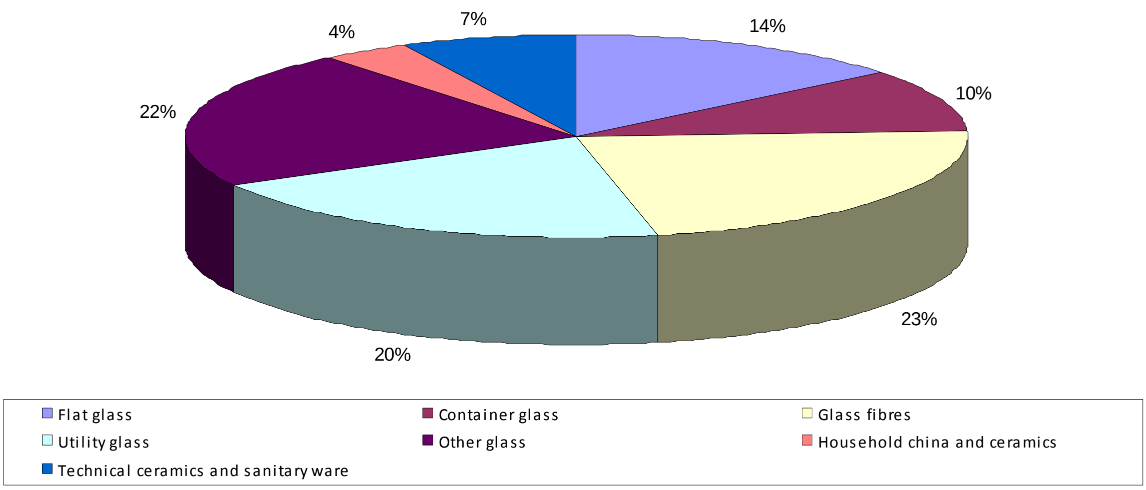
	2008	2009	2010	2011	2012	2013	index 13/12 (%)
Flat glass	4.607	2.742	2.415	2.402	3.324	3.238	97.4
Container glass	1.144	0.942	1.517	2.089	2.190	2.262	103.3
Glass fibres	4.085	4.289	4.532	4.120	4.720	5.140	108.9
Utility glass	5.067	2.398	3.457	3.739	4.461	4.674	104.8
Other glass	7.259	7.424	6.282	5.830	5.169	5.037	97.4
Glass, total	22.162	17.795	18.203	18.180	19.864	20.351	102.5
Household china and ceramics	2.197	1.350	0.899	0.466	0.447	0.867	194.0
Technical ceramics and sanitary ware	0.983	0.781	1.082	1.143	1.991	1.637	82.2
Ceramics, total	3.180	2.131	1.981	1.609	2.438	2.504	102.7
Glass and ceramics, total	**25.342**	**19.926**	**20.184**	**19.789**	**22.302**	**22.855**	**102.5**

The branches of the glass and ceramic industry in the investigated period from 2008 till 2013 notably contributed to the active balance of foreign trade of the whole processing industry of the Czech Republic. The values of the balance of foreign trade confirm significantly important export orientation of this industry. The balance of foreign trade was 22.855 bill. CZK in 2013, it increased by 2.5 % in comparison with 2012. The inter-year growth of the balance of foreign trade was by 10.2 of a percentual point lower than the growth of balance in the period of 2012 and 2011 (12.7 %).

Graph: Development of balance of foreign trade (bill. CZK)



Graph: Structure of balance of foreign trade



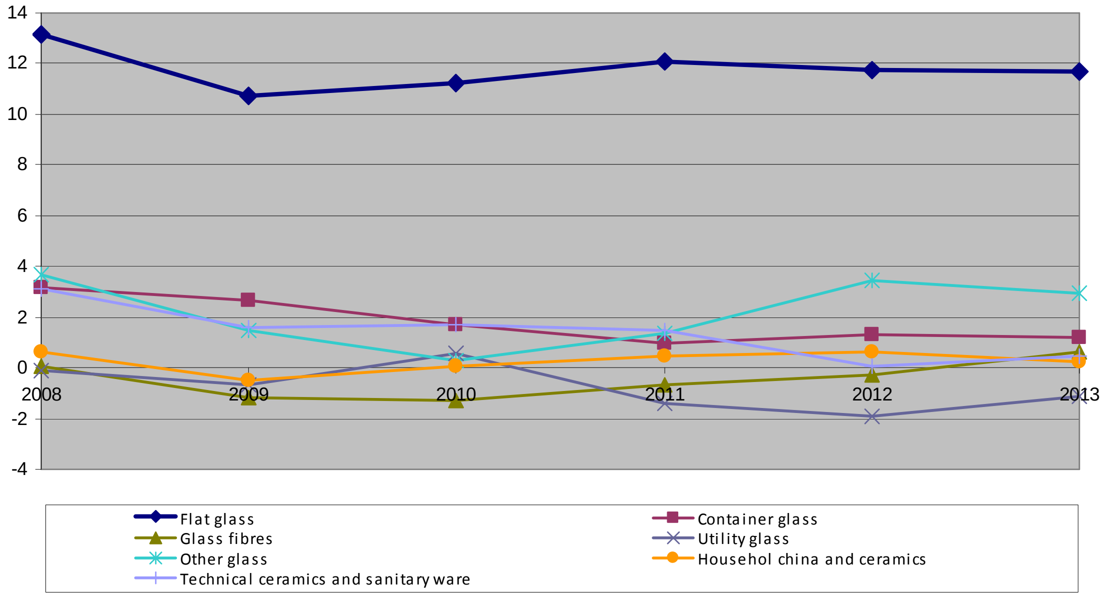
Effective home demand

The effective home demand index is defined by the formula:
(The revenues from industrial activities + Import – Export)

Table: Effective home demand (bill. CZK)

	2008	2009	2010	2011	2012	2013
Flat glass	13.16	10.74	11.22	12.11	11.72	11.67
Container glass	3.14	2.63	1.68	0.96	1.32	1.19
Glass fibres	0.05	-1.20	-1.30	-0.69	-0.30	0.64
Utility glass	-0.12	-0.68	0.56	-1.40	-1.92	-1.10
Other glass	3.67	1.46	0.31	1.38	3.44	2.92
Household china and ceramics	0.65	-0.52	0.07	0.49	0.64	0.25
Technical ceramics and sanitary ware	3.12	1.61	1.70	1.47	0.07	0.47

Graph: Development of effective home demand (bill. CZK)



The development of the effective home demand in individual groups of the glass and ceramic industry is differentiated and specific.

Conclusions

In 2013 there was not succeeded to keep the growth of revenues from years 2011 and 2012. The main reason was the decline of demand for products intended to the building industry in the Czech Republic. The revenues for sale of the own products and services in comparison with 2012 slightly decreased (by 2.3 %). And, as a result of this, the productivity of labour from sales decreased by 1.4 %. The revenues for the direct export increased by 12.0 %. On the contrary, the total export slightly decreased (0.3 %). The balance of foreign trade increased by 2.5 %.

The results in 2014 and the development in 2015 will be dependent on the development of economy of the Czech Republic and on the development on foreign markets.

In the summary of prediction of the Ministry of Finance from July 2014 there is stated:

The real gross domestic product showed in the 1st quarter of 2014 an inter-quarter growth 0.8 % (the gross added value in an inter-quarter comparison increased even by 1.1 %). Therefore, we have increased the prediction of the real gross domestic product in 2014 to 2.7 %. A slow growth of economy should continue even in 2015, when the gross domestic product should grow by 2.5 % within the whole year. All main expenditure components should contribute positively to the growth of the gross domestic product in current and in the following year. The growth should consist roughly of three quarters of the domestic demand and of one quarter of the balance of foreign trade.

In spite of weakening the crown due to foreign currency interventions of the Czech National Bank the year 2014 should be distinguished by a very low inflation. On the contrary from previous years administration influences (mainly decrease of electricity prices) should cause against inflation within this year. In 2015 the growth of consumer prices should although accelerated, but we suppose that inflation will be below the inflation goal of the Czech National Bank.

The above mentioned favourable estimations project also to the improvement of expected labour market and to assumptions of wages and salaries growth. The prediction supposes also a favourable development of balance of foreign trade.

Table: Prediction of the development of main macroeconomic indices
(Source: Ministry of Finance, July 2014)

		2013	2014	2015
Gross domestic product	growth in %, fixed prices	-0.9	2.7	2.5
Average inflation rate	%	1.4	0.6	1.7
Unemployment rate *	average in %	7.0	6.4	6.1
Volume of wages and salaries	growth in %, current prices	-0.9	2.8	3.8
CZK / EUR	average per year	26	27.4	27.4

* (Selection of labour force investigation)

For a favourable development of the glass and ceramic industry the above mentioned facts are good news, however, it cannot be overestimated. The export orientation and dependence on a great number of related industrial branches, for which it delivers its products, make the glass and ceramic industry very vulnerable. Not only development of home demand but also economical development, especially in Europe, which is the greatest export territory of the Czech glass and ceramic industry, will be important. However, exporters will have to face up loosing markets in regions stricken with war conflicts. The increasing competition of countries of the Third World, and mainly from the Far East, is permanently a great problem. This competition impinges without exceptions all branches of the glass and ceramic industry investigated in this Annual Report.

Glass and ceramic industry is a traditional branch of the processing industry of the Czech Republic. During its long-term existence this branch went through periods of prosperity and also recessions. It is possible to say, that it has never face up to such uncertainty and unpredictability of development on markets like in last years. For companies' owners and managers it is necessary not only to predict at least development on markets but also to search new markets and strengthen their marketing activities. Also a consistent orientation to the production with high added value must be carried out. At the same time the product innovations and related services must be strengthen as much as possible.

5. EXPORT AND IMPORT ACCORDING TO PRODUCTION BRANCHES IN THE PERIOD FROM 2008 TILL 2013

Export

The export of the assortment of the glass and ceramic industry is investigated according to the codes of the Customs Tariff, i.e. not only the direct export, but the total export from the Czech Republic.

Flat glass

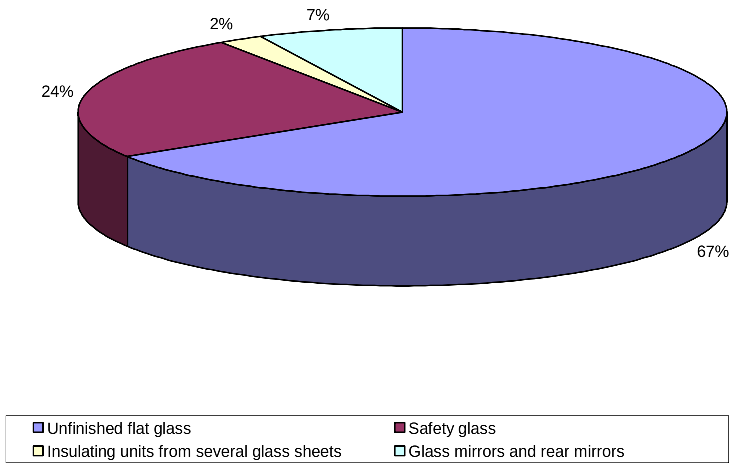
The export of flat glass in 2013 reached an amount of 11,449.6 mill. CZK. In comparison with 2012 the export decreased by 2.6 % (307.6 mill. CZK).

Table: Export of flat glass according to the assortment

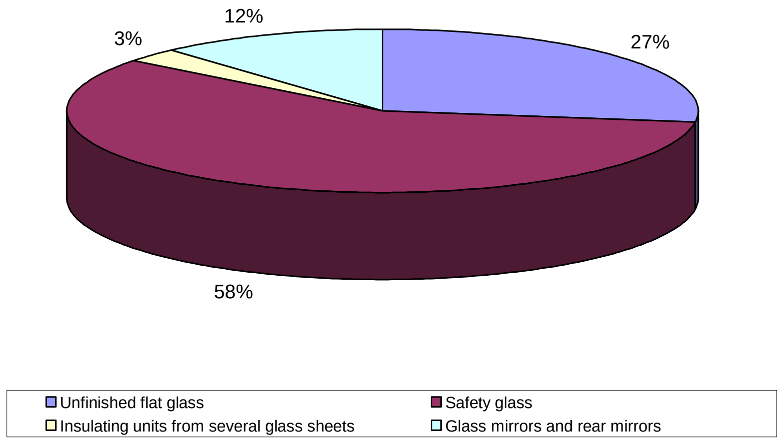
	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Unfinished flat glass	214 016.8	3 224.1	39.6	216 320.6	2 803.2	37.0	229 192.8	2 952.7	33.9
Safety glass	70 951.0	3 420.6	42.0	54 101.2	3 210.7	42.3	80 260.5	3 867.6	44.5
Insulating units from several glass sheets	6 986.2	274.6	3.4	5 725.4	255.8	3.4	7 266.3	282.9	3.3
Glass mirrors and rear mirrors	9 590.0	1 229.4	15.1	10 199.5	1 312.9	17.3	7 951.6	1 594.3	18.3
Totally	**301 544.0**	**8 148.7**	**100.0**	**286 346.7**	**7 582.6**	**100.0**	**324 671.2**	**8 697.5**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Unfinished flat glass	320 056.1	3 543.3	37.2	210 393.8	2 925.9	34.7	192 847.3	2 639.1	32.1
Safety glass	91 371.4	4 030.8	42.3	72 876.8	3 487.7	41.4	64 210.2	3 588.2	43.7
Insulating units from several glass sheets	5 990.5	200.4	2.1	8 978.4	266.6	3.2	8 146.9	263.4	3.2
Glass mirrors and rear mirrors	8 762.3	1 746.2	18.3	9 544.2	1 753.1	20.8	9 447.0	1 721.6	21.0
Totally	**426 180.3**	**9 520.7**	**100.0**	**301 793.2**	**8 433.3**	**100.0**	**274 651.4**	**8 212.3**	**100.0**

Graph: Structure of export of flat glass according to the assortment in 2013 (t)



Graph: Structure of export of flat glass according to the assortment in 2013 (CZK)



The greatest share of export in weight units had the unfinished flat glass in 2013 with 66.2 % (74.7 % was created by float glass), followed by the safety glass export with 24.4 %. As far as the export in CZK, the situation was contrary. The greatest share had the export of safety glass with 58.5 %. The share of the unfinished flat glass export was 27.1 %.

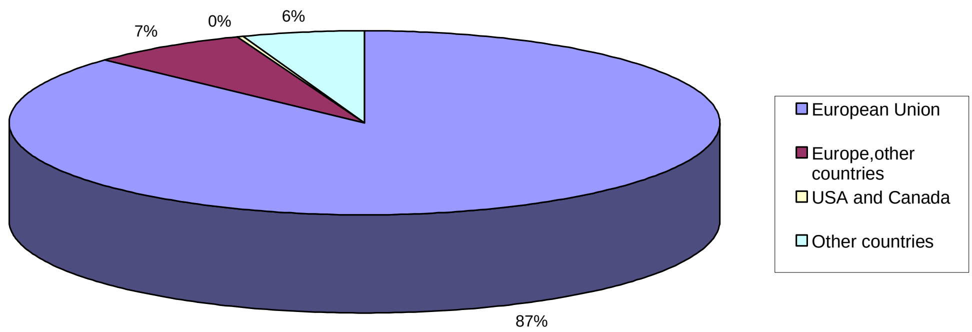
Table: Export of flat glass according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	388 200.5	11 099.1	86.9	349 526.0	9 454.5	91.6	377 649.3	10 172.7	91.5
Europe,other countries	60 686.9	1 073.2	8.4	30 662.8	613.1	5.9	22 175.7	557.0	5.0
USA and Canada	1 397.5	121.1	0.9	945.9	120.9	1.2	1 344.3	41.3	0.4
Other countries	36 432.8	480.8	3.8	3 528.2	137.3	1.3	6 086.6	341.0	3.1
Totally	**486 717.7**	**12 774.2**	**100.0**	**384 662.9**	**10 325.8**	**100.0**	**407 255.9**	**11 112.0**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	394 528.8	10 785.7	90.5	387 173.4	10 491.8	89.2	379 311.4	9 967.2	87.1
Europe,other countries	27 111.3	801.8	6.7	24 073.2	783.0	6.7	20 395.2	800.4	7.0
USA and Canada	1 988.8	40.8	0.3	2 306.9	56.5	0.5	1 341.1	51.9	0.5
Other countries	5 247.1	295.0	2.5	4 909.8	425.9	3.6	13 783.2	630.1	5.5
Totally	**428 876.0**	**11 923.3**	**100.0**	**418 463.3**	**11 757.2**	**100.0**	**414 830.9**	**11 449.6**	**100.0**

A substantial part of flat glass export was directed to the European Union countries. In 2013 the share on export was 87.1 %. The greatest customers were Germany, Austria, Romania, Poland, Belgium, France, Hungary and Slovakia. The greatest customers out of the European Union were Serbia, Ukraine and Russia. The structure of export corresponds to the final use of the assortment of flat glass (mostly utilized in the building and automotive industries) and to the production and trade strategy of companies.

Graph: Structure of export of flat glass according to territories in 2013 (CZK)



Container glass

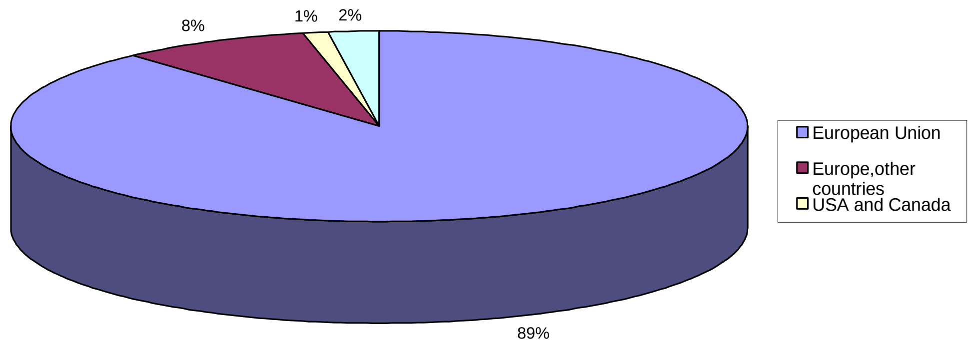
Container glass export in 2013 was 3 391.1 mill. CZK. In comparison with 2012 the export slightly decreased.

Table: Export of container glass according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	170 869.0	1 838.2	86.6	153 244.9	1 744.4	82.0	258 449.2	2 358.9	87.3
Europe,other countries	27 496.5	245.8	11.6	31 581.1	340.3	16.0	27 600.9	300.1	11.1
USA and Canada	615.5	14.4	0.7	808.7	17.0	0.8	725.5	14.3	0.5
Other countries	1 283.3	24.2	1.1	1 191.1	26.2	1.2	1 307.3	27.7	1.0
Totally	**200 264.3**	**2 122.6**	**100.0**	**186 825.8**	**2 127.9**	**100.0**	**288 082.9**	**2 701.0**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	288 752.6	2 797.0	87.0	293 835.3	2 992.9	88.2	280 335.3	2 993.9	88.3
Europe,other countries	31 980.9	354.7	11.0	28 423.2	335.2	9.9	23 225.2	286.4	8.4
USA and Canada	1 253.8	24.3	0.8	1 848.2	36.2	1.1	1 430.8	30.8	0.9
Other countries	1 856.3	38.3	1.2	1 334.1	28.4	0.8	4 302.6	80.0	2.4
Totally	**323 843.6**	**3 214.3**	**100.0**	**325 440.8**	**3 392.7**	**100.0**	**309 293.9**	**3 391.1**	**100.0**

Graph: Structure of export of container glass according to territories in 2013 (CZK)



The export is determined by the character of use of a substantial part of container glass assortment. It is not economical to deliver bottles and preserve jars to long distances. In 2013 88.3 % of export was intended to the European Union countries. The greatest customers were Germany, Poland, Slovakia, Austria, Italy and France. The 8.4 % of export was directed to other European countries. From these countries the greatest customers were Switzerland and Russia.

Glass fibres and products made of

The export of glass fibres and products made of in 2013 was 7786.5 mill. CZK. In comparison with 2012 it increased by 7.5 % (546.9 mill. CZK).

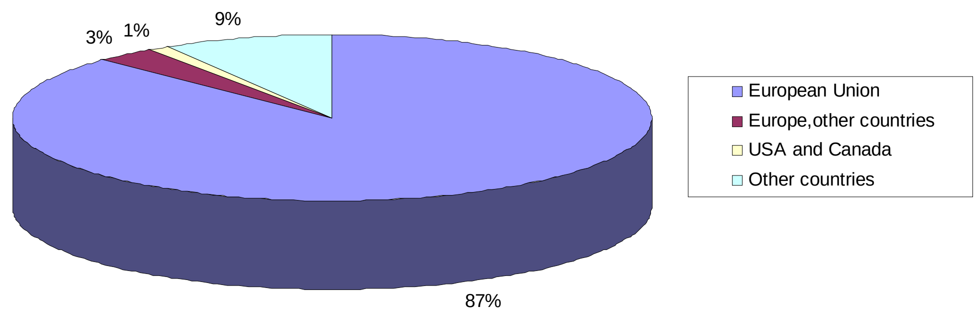
Table: Export of glass fibres and products made of according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	124 632.6	5 807.2	90.2	127 780.5	5 387.2	91.2	152 659.9	6 065.9	91.0
Europe,other countries	6 364.4	315.4	4.9	5 141.6	224.9	3.8	6 681.7	240.5	3.6
USA and Canada	1 359.7	56.8	0.9	1 935.9	79.2	1.3	1 816.1	88.9	1.3
Other countries	6 261.3	258.8	4.0	4 079.6	212.6	3.6	5 281.3	269.9	4.0
Totally	**138 618.0**	**6 438.2**	**100.0**	**138 937.6**	**5 903.9**	**100.0**	**166 439.0**	**6 665.2**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	142 284.1	5 953.7	89.4	144 169.5	6 530.9	90.2	134 110.3	6 785.8	87.1
Europe,other countries	5 358.6	234.4	3.5	8 275.7	279.5	3.9	8 404.4	252.0	3.2
USA and Canada	1 247.0	68.3	1.0	1 228.2	74.8	1.0	1 163.9	75.2	1.0
Other countries	5 265.7	401.3	6.0	6 112.4	354.4	4.9	15 697.0	673.5	8.6
Totally	**154 155.4**	**6 657.7**	**100.0**	**159 785.8**	**7 239.6**	**100.0**	**159 375.6**	**7 786.5**	**100.0**

A substantial part of export (87.1 %) was realized in the European Union countries. The greatest customers in 2013 were Germany, Poland, France, Italy, Austria and Slovakia. As far as countries out of the European Union it was Russia and Ukraine.

Graph: Structure of export of glass fibres and products made of according to territories in 2013 (CZK)



Utility glass

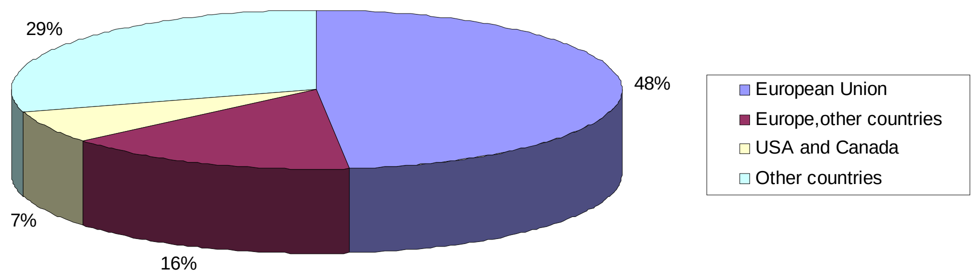
The export of utility glass belongs to the traditional export branches of the Czech processing industry. In 2013 the export was in amount of 6298.2 mill. CZK. In comparison with 2012 it increased by 3.0 % (185.8 mill. CZK). Even in 2013 the demand for utility glass products increased.

Table: Export of utility glass according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	15 730.9	2 739.6	41.0	24 609.6	1 404.3	36.9	33 857.1	2 095.9	41.8
Europe,other countries	12 477.9	1 119.3	16.7	6 478.4	521.5	13.7	8 869.6	776.7	15.5
USA and Canada	3 187.4	852.4	12.8	1 195.7	405.4	10.7	2 275.8	454.1	9.1
Other countries	10 921.3	1 974.0	29.5	7 771.0	1 474.2	38.7	10 671.6	1 683.7	33.6
Totally	**42 317.5**	**6 685.3**	**100.0**	**40 054.7**	**3 805.4**	**100.0**	**55 674.1**	**5 010.4**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	42 794.7	2 389.7	45.2	41 483.4	2 878.3	47.1	46 550.5	3 044.2	48.3
Europe,other countries	9 435.6	840.2	15.9	9 670.8	928.1	15.2	9 418.2	978.2	15.5
USA and Canada	2 902.3	394.3	7.5	2 702.0	443.2	7.3	2 485.6	420.3	6.7
Other countries	12 126.0	1 666.7	31.5	12 403.4	1 862.8	30.5	12 470.9	1 855.5	29.5
Totally	**67 258.6**	**5 290.9**	**100.0**	**66 259.6**	**6 112.4**	**100.0**	**70 925.2**	**6 298.2**	**100.0**

Graph: Structure of export of utility glass according to territories in 2013 (CZK)



It is possible to say that the utility glass assortment is exported to the whole world. The share of export in 2013 to the European countries was 63.8 %. The greatest customers were Germany, Russia, France, Slovakia, Austria, Italy, Hungary, Poland and Ukraine. The share on export directed to the Other countries (export to 80 countries) and to the USA and Canada was in amount of 36.2 %. The greatest customers were the USA, Japan, Azerbaijan, Egypt, Iran, the United Arab Emirates, China, Brazil and Kazakhstan.

Other glass

The assortment of the other glass export is very wide. It includes technical, laboratory and laboratory apparatus glass, technical spheres, glass industrial apparatuses, protective welding glass, optical glass, and also the production of glass blocks, glass fashion jewellery semiproducts and production of lighting glass, is incorporated.

The other glass export in 2013 reached amount of 6730.3 mill. CZK, what is by 7.7 % less than in 2012 (561.4 mill. CZK).

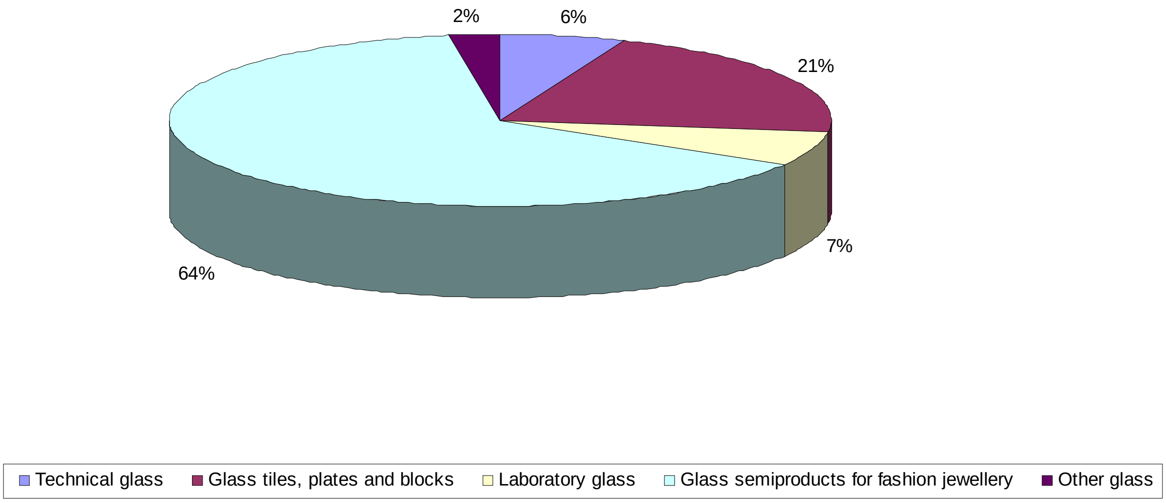
In 2013 lighting glass which is not stated in codes for the export and import of glass (Products for electrical lighting devices, made of glass, except reflectors and facet glass etc. glass decorations for electrical chandeliers, approx. 300 mill. CZK) was not included to the export. A significant inter-year decrease, 287.0 mill. CZK was recorded in the assortment of glass fashion jewellery semiproducts.

Table: Export of other glass according to assortment

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Technical glass	10 011.8	1 134.0	12.6	9 275.5	982.3	10.8	7 174.8	633.0	7.7
Glass tiles, plates and blocks	58 160.4	1 044.6	11.6	63 918.3	1 307.0	14.4	64 350.6	1 422.3	17.4
Laboratory glass	3 156.0	430.1	4.8	2 535.4	350.5	3.9	3 680.3	435.9	5.3
Glass semiproducts for fashion jewellery	4 480.5	5 288.4	58.6	3 849.7	5 078.8	56.1	4 508.1	4 974.5	60.8
Other glass	37 303.6	1 123.0	12.4	26 991.1	1 342.4	14.8	12 034.1	721.5	8.8
Totally	**113 112.3**	**9 020.1**	**100.0**	**106 570.0**	**9 061.0**	**100.0**	**91 747.9**	**8 187.2**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Technical glass	7 041.0	616.1	8.1	4 674.7	498.1	6.8	3 813.5	405.6	6.0
Glass tiles, plates and blocks	68 584.5	1 405.7	18.6	70 446.9	1 348.1	18.5	71 226.7	1 422.2	21.1
Laboratory glass	4 070.9	522.1	6.9	3 800.2	541.6	7.4	3 012.4	442.3	6.6
Glass semiproducts for fashion jewellery	4 640.8	4 581.1	60.5	4 936.5	4 462.0	61.2	5 075.4	4 293.7	63.8
Other glass	13 726.2	452.3	6.0	22 212.4	441.9	6.1	10 235.6	166.5	2.5
Totally	**98 063.4**	**7 577.3**	**100.0**	**106 070.7**	**7 291.7**	**100.0**	**93 363.6**	**6 730.3**	**100.0**

Graph: Structure of other glass export according to assortment in 2013 (CZK)



The greatest share with 63.8 % has the export of fashion jewellery and glass fashion jewellery semiproducts. The export of this assortment which is traditional in the Czech Republic has been facing up still stronger and substantially cheaper competition from the Far East. In comparison with 2012 the share of glass tiles, plates and bricks (21.1 %) increased, on the contrary the share of laboratory glass decreased (6.6 %), and the share of technical glass has been also decreasing (6.0 %).

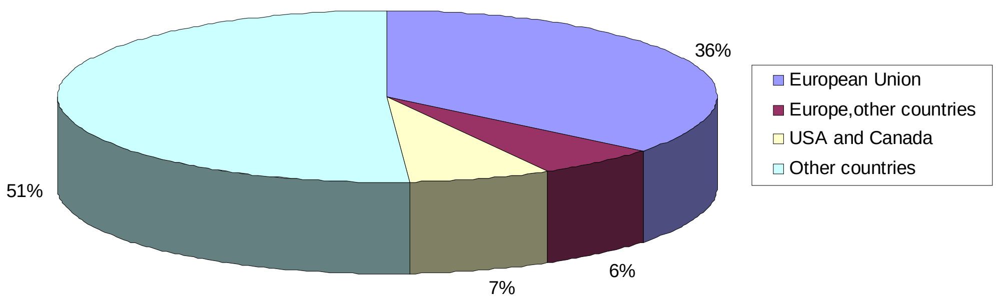
In the following table the export of other glass according to territories is given.

Table: Export of other glass according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	77 207.8	2 713.8	30.1	67 557.4	3 322.7	36.7	54 630.7	2 738.0	33.4
Europe,other countries	2 381.0	180.6	2.0	1 960.6	141.7	1.6	3 783.1	259.5	3.2
USA and Canada	5 534.1	628.9	7.0	1 752.4	412.0	4.5	5 213.1	701.7	8.6
Other countries	27 989.4	5 496.8	60.9	35 299.7	5 184.6	57.2	28 121.0	4 488.0	54.8
Totally	**113 112.3**	**9 020.1**	**100.0**	**106 570.1**	**9 061.0**	**100.0**	**91 747.9**	**8 187.2**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	53 911.4	2 781.4	34.0	59 141.6	2 564.8	35.2	50 455.9	2 415.2	35.9
Europe,other countries	3 646.0	244.1	3.0	5 792.3	312.5	4.3	4 600.3	410.0	6.1
USA and Canada	6 584.4	466.9	5.7	7 504.3	475.2	6.5	7 106.4	466.1	6.9
Other countries	33 921.6	4 084.9	49.9	33 632.5	3 939.2	54.0	31 201.0	3 439.0	51.1
Totally	**98 063.4**	**8 187.2**	**92.6**	**106 070.7**	**7 291.7**	**100.0**	**93 363.6**	**6 730.3**	**100.0**

Graph: Structure of export of other glass according to territories in 2013 (CZK)



In contrast with flat, container and fibre glass export, the most of the other glass export (66.3 %) is oriented to the countries out of Europe. In each group of products there is a different situation and it can differ according to orders every year. In 2013 the share of export of glass tiles, plates and blocks assortment (66.3 %), laboratory glass (68.9 %) and technical glass (58.1 %) to the European Union prevailed. On the other side the export of glass semiproducts for fashion jewellery assortment (75.5 %) prevailed to the Other countries, including the USA and Canada.

The greatest customers in the European Union were Germany, Poland, Italy, France, Belgium, Austria and Romania, in the other European countries Russia, Ukraine, Switzerland and Norway. From the Other countries and the USA and Canada the greatest customers, mostly of fashion jewellery and glass semiproducts for fashion jewellery, were the United Arab Emirates, China, Hongkong, the USA, Japan and India.

Household china and ceramics

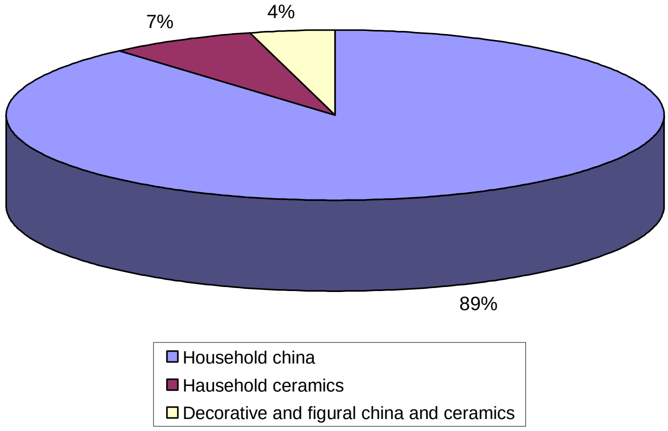
The household china export similarly as the utility glass export belongs to the traditional export branches of the Czech processing industry. In 2013 the export was 2136.6 mill. CZK. In comparison with 2012 the export increased by 11.2 % (214.8 mill. CZK).

Table: Export of household china and ceramics according to the assortment

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Household china	18 883,2	3 332,1	94,7	11 245,0	2 253,8	94,1	20 826,3	1 899,5	92,0
Hausehold ceramics	2 157,0	108,6	3,1	1 488,8	82,8	3,5	1 387,6	107,2	5,2
Decorative and figural china and ceramics	478,8	77,4	2,2	399,3	58,7	2,5	391,4	58,7	2,8
Totally	**21 519,0**	**3 518,1**	**100,0**	**13 133,1**	**2 395,3**	**100,0**	**22 605,3**	**2 065,4**	**100,0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Household china	13 466,4	1 551,6	86,7	14 549,7	1 713,0	89,1	17 763,6	1 890,4	88,5
Hausehold ceramics	1 514,4	188,2	10,5	1 377,1	127,1	6,6	1 637,8	154,3	7,2
Decorative and figural china and ceramics	316,7	49,5	2,8	381,0	81,7	4,3	369,7	91,9	4,3
Totally	**15 297,5**	**1 789,3**	**100,0**	**16 307,8**	**1 921,8**	**100,0**	**19 771,1**	**2 136,6**	**100,0**

Graph: Structure of export of household china and ceramics according to the assortment in 2013 (CZK)



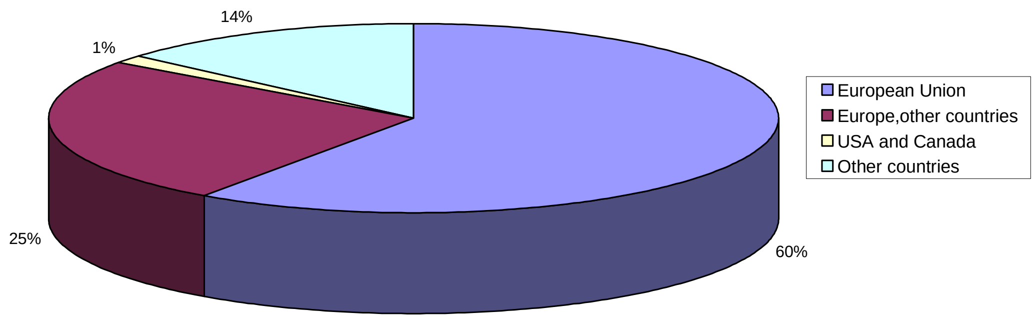
The share of household china in the branch household china and ceramics is 88.5 %.

Table: Export of household china and ceramics according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	14 326.2	1 185.6	33.7	8 127.5	742.0	31.0	17 812.2	887.4	43.0
Europe,other countries	4 780.3	558.0	15.9	2 970.6	387.9	16.2	3 406.7	438.6	21.2
USA and Canada	1 196.3	1 157.3	32.9	631.3	613.6	25.6	628.1	462.5	22.4
Other countries	1 216.2	617.2	17.5	1 404.1	651.8	27.2	758.3	276.9	13.4
Totally	**21 519.0**	**3 518.1**	**100.0**	**13 133.5**	**2 395.3**	**100.0**	**22 605.3**	**2 065.4**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	10 668.7	898.1	50.2	12 040.1	1 079.8	56.2	15 499.8	1 277.8	59.8
Europe,other countries	3 298.7	457.7	25.6	3 052.5	496.9	25.9	3 054.4	539.0	25.2
USA and Canada	491.5	134.7	7.5	384.2	101.7	5.3	114.8	27.0	1.3
Other countries	838.6	298.8	16.7	831.8	243.4	12.7	1 102.1	292.8	13.7
Totally	**15 297.5**	**1 789.3**	**100.0**	**16 308.6**	**1 921.8**	**100.0**	**19 771.1**	**2 136.6**	**100.0**

Graph: Structure of export of household china and ceramics according to territories in 2013 (CZK)



As follows from the above given table and graph the export to all investigated territories is increasing since 2012, comparing with unpleasant period from 2007 till 2011.

The greatest customers in the European Union countries were Germany, Slovakia, and Austria. In the other European countries it was Russia (85.70 % of export volume) and Switzerland. In the group of Other countries, incl. the USA and Canada, the export was directed to 55 countries of the world. The greatest customers in 2013 were the USA, Azerbaijan and Korea.

The household china export has been very strongly influenced by substantially cheaper ware from the Far East like the export of utility glass and glass semiproducts for fashion jewellery.

Technical ceramics and sanitary ware

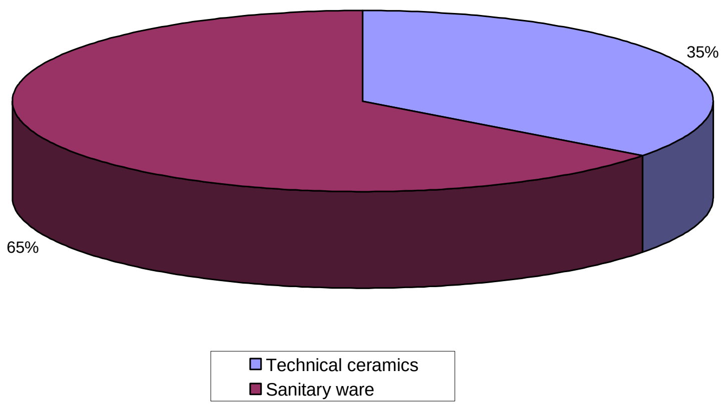
The technical ceramics and sanitary ware export was 2882.9 mill. CZK, in 2013. In comparison with 2012 the export decreased by 6.0 % (184.4 mill. CZK). The decrease of the export of technical ceramics by 150.5 mill. CZK, was fundamental.

Table: Export of technical ceramics and sanitary ware according to the assortment

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Technical ceramics	4 459.8	481.0	23.0	3 689.7	392.0	23.4	1 766.6	467.0	24.8
Sanitary ware	32 954.0	1 606.2	77.0	23 480.1	1 284.0	76.6	24 839.3	1 416.1	75.2
Totally	**37 413.8**	**2 087.2**	**100.0**	**27 169.8**	**1 676.0**	**100.0**	**26 605.9**	**1 883.1**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Technical ceramics	4 439.2	631.9	27.4	4 598.7	1 165.0	38.0	7 524.0	1 014.5	35.2
Sanitary ware	28 581.0	1 674.0	72.6	32 584.5	1 902.3	62.0	31 904.4	1 868.4	64.8
Totally	**33 020.2**	**2 305.9**	**100.0**	**37 183.2**	**3 067.3**	**100.0**	**39 428.4**	**2 882.9**	**100.0**

Graph: Structure of export of technical ceramics and sanitary ware according to the assortment in 2013 (CZK)



In 2013 the sanitary ware shared with 64.8 % and the technical ceramics with 35.2 % on export.

Table: Export of technical ceramics and sanitary ware according to territories

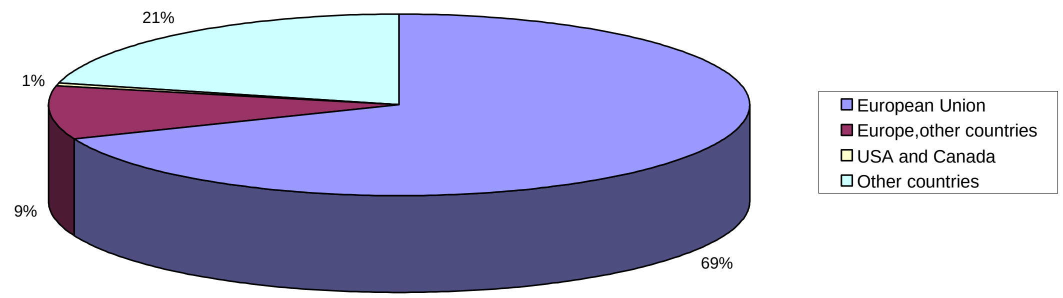
	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	31 165.6	1 707.9	81.8	23 490.1	1 415.0	84.4	22 520.0	1 554.7	82.6
Europe,other countries	3 875.9	265.7	12.7	1 807.1	145.0	8.7	2 291.2	218.3	11.6
USA and Canada	56.6	10.3	0.5	38.6	9.1	0.5	49.0	10.2	0.5
Other countries	2 315.7	103.3	4.9	1 834.0	106.9	6.4	1 744.7	99.9	5.3
Totally	**37 413.8**	**2 087.2**	**100.0**	**27 169.8**	**1 676.0**	**100.0**	**26 604.9**	**1 883.1**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	28 132.9	1 907.0	82.7	29 664.8	2 066.1	67.4	31 605.5	1 983.9	68.8
Europe,other countries	3 106.7	261.4	11.3	3 883.7	310.2	10.1	3 781.8	270.8	9.4
USA and Canada	33.8	6.5	0.3	113.1	20.2	0.7	119.7	20.7	0.7
Other countries	1 746.8	131.0	5.7	3 521.6	670.8	21.9	3 921.4	607.5	21.1
Totally	**33 020.2**	**2 305.9**	**100.0**	**37 183.2**	**3 067.3**	**100.0**	**39 428.4**	**2 882.9**	**100.0**

A substantial part of both assortments was exported to the countries of Europe. Sanitary ware shared on export to the European countries with 86.1 % (73.5 % to the European Union), technical ceramics shared on the export with 63.6 % (60.1 % to the European Union). To the greatest customers of sanitary ware in Europe belong Germany, Austria and Great Britain.

Due to an unpleasant development in the building industry in the European Union, sanitary ware producers look for new markets in the countries out of Europe. Sanitary ware is exported e.g. to China, the Republic of South Africa, Tunis, Oman, Nigeria and Mongolia.

Graph: Structure of export of technical ceramics and sanitary ware according to territories in 2013 (CZK)



Import

Flat glass

The import of flat glass assortment was in 2013 in amount of 8212.3 mill. CZK. In comparison with 2012 it decreased by 12.6 % (221.0 mill. CZK).

Table: Import of flat glass according to the assortment

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Unfinished flat glass	214 016.8	3 224.1	39.6	216 320.6	2 803.2	37.0	229 192.8	2 952.7	33.9
Safety glass	70 951.0	3 420.6	42.0	54 101.2	3 210.7	42.3	80 260.5	3 867.6	44.5
Insulating units from several glass sheets	6 986.2	274.6	3.4	5 725.4	255.8	3.4	7 266.3	282.9	3.3
Glass mirrors and rear mirrors	9 590.0	1 229.4	15.1	10 199.5	1 312.9	17.3	7 951.6	1 594.3	18.3
Totally	**301 544.0**	**8 148.7**	**100.0**	**286 346.7**	**7 582.6**	**100.0**	**324 671.2**	**8 697.5**	**100.0**

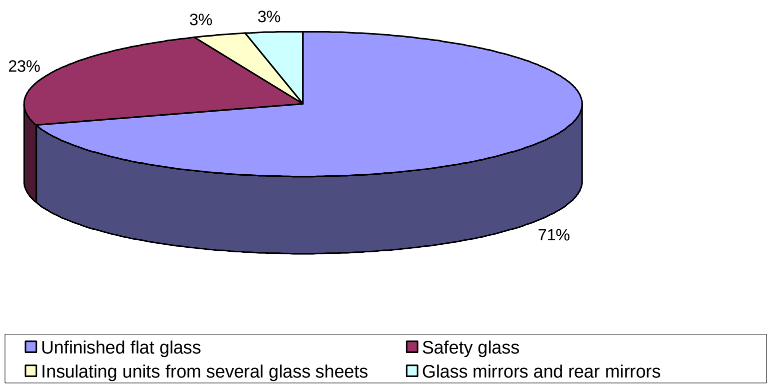
	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Unfinished flat glass	320 056.1	3 543.3	37.2	210 393.8	2 925.9	34.7	192 847.3	2 639.1	32.1
Safety glass	91 371.4	4 030.8	42.3	72 876.8	3 487.7	41.4	64 210.2	3 588.2	43.7
Insulating units from several glass sheets	5 990.5	200.4	2.1	8 978.4	266.6	3.2	8 146.9	263.4	3.2
Glass mirrors and rear mirrors	8 762.3	1 746.2	18.3	9 544.2	1 753.1	20.8	9 447.0	1 721.6	21.0
Totally	**426 180.3**	**9 520.7**	**100.0**	**301 793.2**	**8 433.3**	**100.0**	**274 651.4**	**8 212.3**	**100.0**

As follows from the above stated table (expressed in CZK), the import decreased in unfinished flat glass, insulation units and mirrors.

The greatest share on the flat glass import in mass had the import of unfinished flat glass with 70.2 %, from which float glass shows 91.6 %. The amount of import is given by the processing capacities in the Czech Republic.

Toughened laminated safety glass shared with 43.7 % (expressed in CZK) on import. It is followed by unfinished flat glass with 32.1 %.

Graph: Structure of import of flat glass according to the assortment in 2013 (t)



Graph: Structure of import of flat glass according to the assortment in 2013 (CZK)

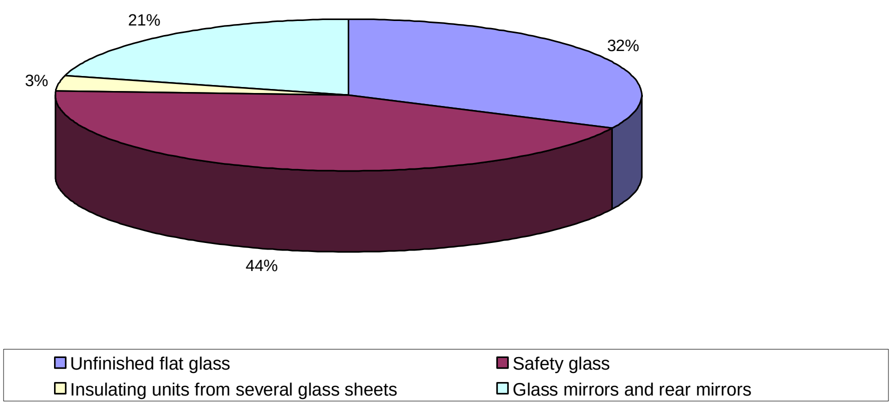
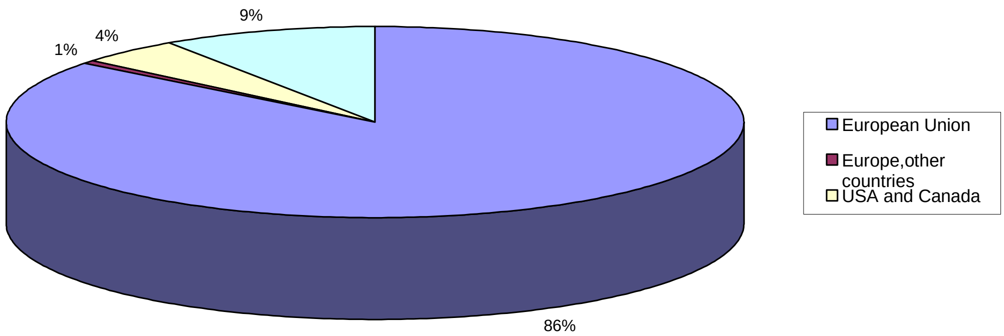


Table: Import of flat glass according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	283 701.9	7 431.3	91.0	275 802.6	6 989.2	92.2	297 369.5	7 637.2	87.8
Europe,other countries	1 151.9	32.4	0.4	533.1	137.5	1.8	5 697.2	99.6	1.1
USA and Canada	1 304.0	64.2	0.8	9 236.0	135.6	1.8	813.4	208.3	2.4
Other countries	15 350.2	638.8	7.8	9 236.0	320.3	4.2	20 791.1	752.4	8.7
Totally	**301 508.0**	**8 166.7**	**100.0**	**294 807.7**	**7 582.6**	**100.0**	**324 671.2**	**8 697.5**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	395 053.0	8 556.2	89.9	273 871.8	7 215.9	85.6	252 951.3	7 023.5	85.5
Europe,other countries	362.4	48.1	0.5	318.4	46.5	0.6	166.6	59.2	0.7
USA and Canada	346.2	241.4	2.5	426.3	352.4	4.2	420.7	352.8	4.3
Other countries	30 418.7	675.0	7.1	27 176.7	818.5	9.7	21 112.8	776.8	9.5
Totally	**426 180.3**	**9 520.7**	**100.0**	**301 793.2**	**8 433.3**	**100.0**	**274 651.4**	**8 212.3**	**100.0**

Graph: Structure of import of flat glass according to territories in 2013 (CZK)



In 2013 85.5 % of flat glass (expressed in CZK) was imported to the Czech Republic from the European Union countries. The greatest importers were Belgium, Germany, France, Poland and Hungary.

Container glass

The container glass import in 2013 was in amount of 1128.7 mill. CZK, i.e. it was lower by 6.2 % than in 2012.

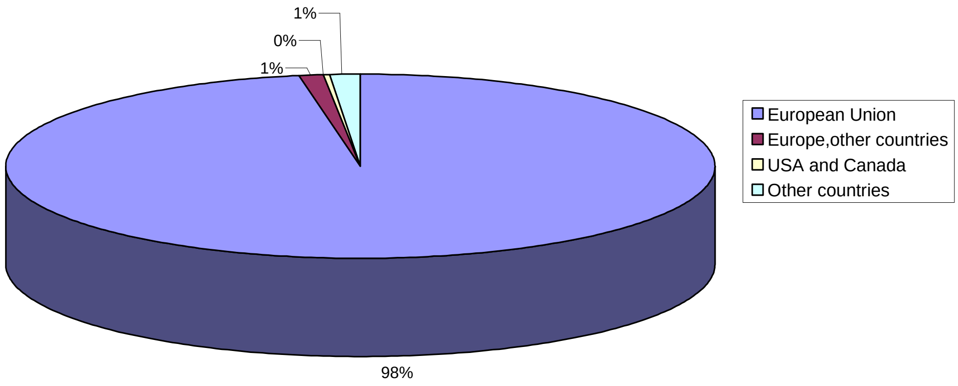
Table: Import of container glass according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	80 178.1	902.5	92.2	96 112.3	1 107.1	93.3	108 138.8	1 134.3	95.8
Europe,other countries	6 326.5	63.9	6.5	6 010.1	65.1	5.5	4 890.7	36.7	3.1
USA and Canada	1.4	1.0	0.1	1.7	0.8	0.1	58.5	3.2	0.3
Other countries	377.4	11.2	1.1	362.6	13.0	1.1	181.2	9.9	0.8
Totally	**86 883.4**	**978.6**	**100.0**	**102 486.7**	**1 186.0**	**100.0**	**113 269.2**	**1 184.1**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	95 964.9	1 080.3	96.0	102 250.1	1 147.7	95.4	104 663.2	1 097.8	97.3
Europe,other countries	3 256.9	24.7	2.2	4 114.3	35.2	2.9	1 326.4	12.6	1.1
USA and Canada	1.1	0.8	0.1	4.4	1.7	0.1	14.5	3.7	0.3
Other countries	641.5	19.6	1.7	398.8	18.8	1.6	393.6	14.6	1.3
Totally	**99 864.4**	**1 125.4**	**100.0**	**106 767.6**	**1 203.4**	**100.0**	**106 397.7**	**1 128.7**	**100.0**

The import like the export is determined by the character of use of container glass assortment. In 2013 97.3 % of import was realized from the European Union countries. The greatest importers were Germany, Slovakia and Poland.

Graph: Structure of import of container glass according to territories in 2013 (CZK)



Glass fibres and products made of

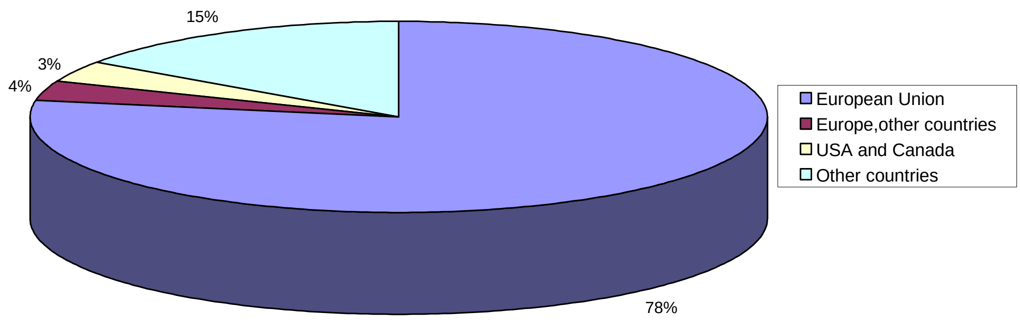
The import of glass fibres and products made of to the Czech Republic was 2645.6 mill. CZK in 2013, what is by 5.0 % (125.9 mill. CZK) more than in 2012.

Table: Import of glass fibres and products made of according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	37 410.2	1 829.3	77.8	29 377.8	1 201.5	74.4	35 831.1	1 467.3	68.8
Europe,other countries	1 509.7	122.5	5.2	3 679.0	118.9	7.4	6 513.2	192.6	9.0
USA and Canada	511.7	101.4	4.3	218.1	16.6	1.0	1 075.7	87.4	4.1
Other countries	8 696.4	297.9	12.7	7 270.1	278.2	17.2	10 638.4	386.0	18.1
Totally	**48 128.0**	**2 351.1**	**100.0**	**40 545.0**	**1 615.2**	**100.0**	**54 058.4**	**2 133.3**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	44 036.3	1 534.8	62.7	48 275.6	1 832.8	72.7	41 449.5	2 054.6	77.7
Europe,other countries	1 163.5	53.4	2.2	1 512.2	102.4	4.1	1 426.1	94.7	3.6
USA and Canada	1 405.9	103.6	4.2	546.5	88.4	3.5	529.0	91.1	3.4
Other countries	19 906.1	756.5	30.9	13 705.3	496.1	19.7	9 936.8	405.2	15.3
Totally	**66 511.8**	**2 448.3**	**100.0**	**64 039.6**	**2 519.7**	**100.0**	**53 341.4**	**2 645.6**	**100.0**

Graph: Structure of import of glass fibres and products made of according to territories in 2013 (CZK)



The share of the European Union countries on import was 77.7 %. The greatest importers were Germany, Hungary, Poland, Slovakia and France. The importers from the other European countries were Russia, Belarus and Switzerland. The share of import of the Other countries, incl. the USA and Canada increased to 18.7 % in 2013. The greatest importers in 2013 were China, the USA and Taiwan. The import from China and Taiwan in the total amount of 299.6 mill. CZK created 97.8 % of import of the Other countries. However, the import from these two countries decreased by 11 % (37.1 mill. CZK) in comparison with previous year.

Utility glass

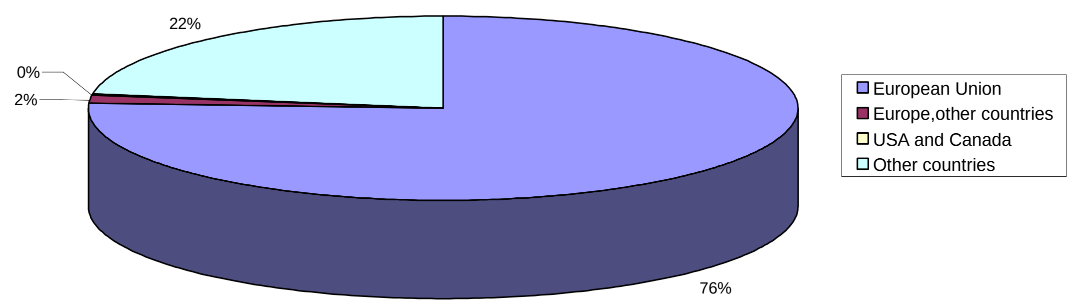
The utility glass import in 2013 was 1624.3 mill. CZK.

Table: Import of utility glass according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	10 860.7	1 271.9	78.6	20 017.5	1 081.8	76.9	24 038.6	1 071.7	69.0
Europe,other countries	2 244.2	46.2	2.9	1 485.4	31.0	2.2	1 142.9	28.0	1.8
USA and Canada	55.4	7.1	0.4	17.2	3.3	0.2	23.2	2.6	0.2
Other countries	7 792.8	292.9	18.1	7 996.4	291.0	20.7	11 656.9	450.4	29.0
Totally	**20 953.1**	**1 618.1**	**100.0**	**29 516.5**	**1 407.1**	**100.0**	**36 861.6**	**1 552.7**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	42 883.0	1 150.7	74.2	39 905.1	1 286.9	78.0	32 899.1	1 229.6	75.7
Europe,other countries	1 107.6	26.9	1.7	565.3	14.2	0.9	793.0	26.5	1.6
USA and Canada	30.6	3.2	0.2	17.5	3.7	0.2	15.1	3.3	0.2
Other countries	10 358.1	370.7	23.9	5 581.2	345.9	21.0	9 093.1	364.9	22.5
Totally	**54 379.3**	**1 551.5**	**100.0**	**46 069.1**	**1 650.7**	**100.0**	**42 800.3**	**1 624.3**	**100.0**

Graph: Structure of import of utility glass according to territories in 2013 (CZK)



The greatest share of import (75.7 %) was realized from the European Union countries. The greatest importers were Germany, Bulgaria, Poland, Italy, Portugal and France. From the Other countries (22.5 % of total import) the greatest importers in 2013 were China (169.0 mill. CZK) and Turkey (171.1 mill. CZK). Both these countries totally created 92.7 % of import from the Other countries.

Other glass

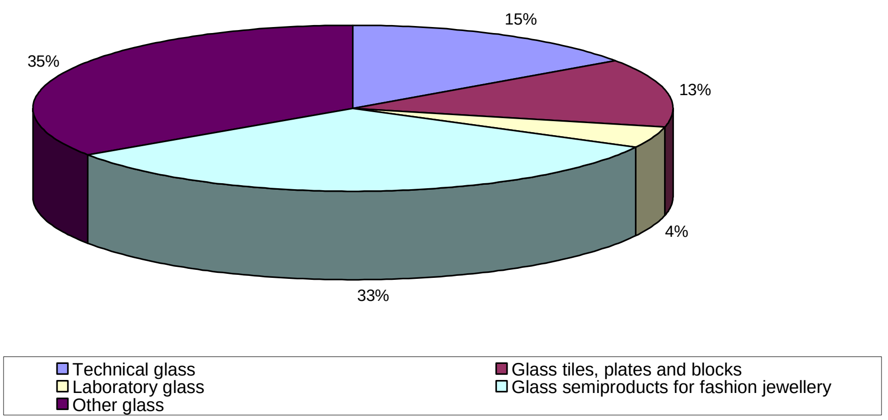
The import of other glass in 2013 was 1693.0 mill. CZK. The inter-year decline was by 20.3 % (429.9 mill. CZK).

Table: Import of other glass according to the assortment

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Technical glass	1 791.0	263.0	14.9	1 428.7	140.2	8.6	1 917.0	232.7	12.2
Glass tiles, plates and blocks	12 303.4	376.0	21.3	8 650.2	275.8	16.8	8 069.5	284.8	14.9
Laboratory glass	246.1	56.0	3.2	2 988.3	60.4	3.7	1 892.6	73.0	3.8
Glass semiproducts for fashion jewellery	1 574.0	281.6	16.0	1 822.6	327.1	20.0	2 525.0	464.1	24.4
Other glass	85 889.9	784.7	44.6	97 409.6	833.8	50.9	102 766.8	850.5	44.6
Totally	**101 804.4**	**1 761.3**	**100.0**	**112 299.4**	**1 637.3**	**100.0**	**117 170.9**	**1 905.1**	**100.0**

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Technical glass	2 057.8	245.1	14.0	1 967.6	240.3	11.3	2 466.3	259.8	15.3
Glass tiles, plates and blocks	6 664.2	230.4	13.2	5 550.0	213.4	10.0	5 130.4	226.1	13.4
Laboratory glass	502.1	76.4	4.4	473.2	80.0	3.8	320.0	67.0	4.0
Glass semiproducts for fashion jewellery	3 226.2	346.9	19.9	3 313.9	812.3	38.3	2 614.7	555.3	32.8
Other glass	157 324.0	847.9	48.5	136 098.9	777.5	36.6	136 408.7	584.8	34.5
Totally	**169 774.3**	**1 746.7**	**100.0**	**147 403.6**	**2 123.5**	**100.0**	**146 940.1**	**1 693.0**	**100.0**

Graph: Structure of import of other glass according to the assortment in 2013 (CZK)



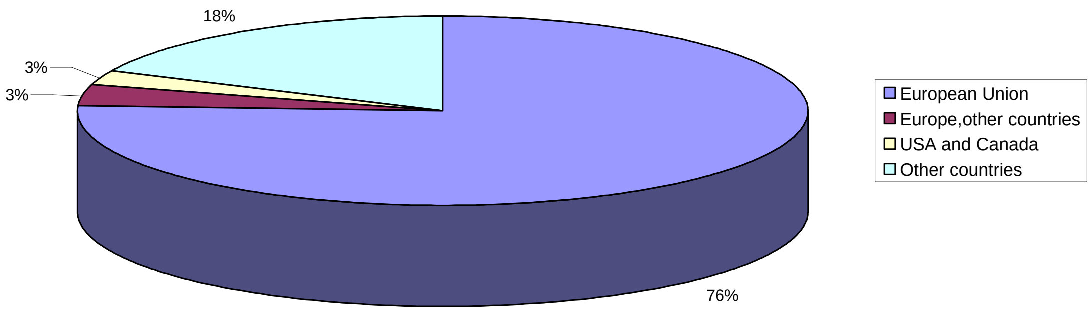
In the following table the other glass import according to territories is given.

Table: Import of other glass according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	94 318.8	1 371.2	77.9	107 923.4	1 298.3	79.3	106 632.9	1 487.9	78.1
Europe,other countries	256.0	36.9	2.1	81.0	15.3	0.9	2 730.4	24.0	1.3
USA and Canada	25.1	21.1	1.2	148.4	42.8	2.6	3 178.0	28.0	1.5
Other countries	7 204.5	332.1	18.9	4 146.6	280.9	17.2	4 629.6	365.2	19.2
Totally	**101 804.4**	**1 761.3**	**100.0**	**112 299.4**	**1 637.3**	**100.0**	**117 170.9**	**1 905.1**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	138 606.8	1 221.9	70.0	138 018.4	1 702.8	80.2	127 864.7	1 285.3	75.9
Europe,other countries	24 218.6	52.7	3.0	6 101.1	37.9	1.8	108.2	58.6	3.5
USA and Canada	40.1	40.3	2.3	33.0	36.2	1.7	341.0	42.8	2.5
Other countries	6 908.8	431.8	24.7	3 251.1	346.0	16.3	18 626.2	306.3	18.1
Totally	**169 774.3**	**1 746.7**	**100.0**	**147 403.6**	**2 122.9**	**100.0**	**146 940.1**	**1 693.0**	**100.0**

Graph: Structure of import of other glass according to territories in 2013 (CZK)



In 2013 the import from the European Union countries was 75.9 % and 18.1 % from the Other countries. The import was realized from various countries according to the assortment. In 2013 the greatest importers of technical glass were Germany, France, China, Malaysia and Taiwan, laboratory glass Germany, Italy, the USA, Great Britain, India and China, glass tiles, plates and blocks Belgium, Germany, the USA, Great Britain, India and China, glass semiproducts for fashion jewellery Austria, Germany, France, the USA, China, Hongkong and Japan.

Household china and ceramics

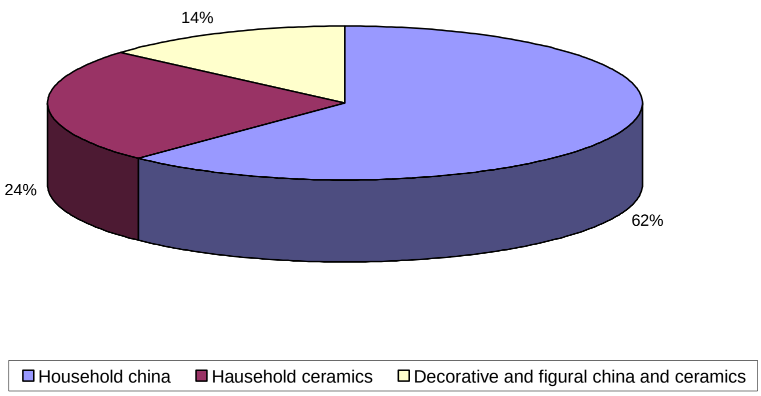
In 2013 the household china and ceramics were imported to the Czech Republic in a value of 1270.2 mill. CZK, i.e. by 13.8 % (203.2 mill. CZK) less than in 2012.

Table: Import of household china and ceramics according to the assortment

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	podíl (%)
Household china	11 765.6	732.7	55.5	8 302.5	542.5	51.9	9 264.1	594.5	51.0
Household ceramics	11 270.3	416.1	31.5	8 094.9	342.3	32.8	10 461.3	405.3	34.8
Decorative and figural china and ceramics	3 503.1	171.9	13.0	3 050.7	159.8	15.3	3 534.0	166.3	14.3
Totally	**26 539.0**	**1 320.7**	**100.0**	**19 448.1**	**1 044.6**	**100.0**	**23 259.4**	**1 166.1**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	podíl (%)
Household china	10 625.6	728.7	55.1	9 037.4	790.4	53.6	7 974.8	791.6	62.3
Hausehold ceramics	8 712.4	415.3	31.4	7 820.3	522.5	35.4	5 429.8	304.5	24.0
Decorative and figural china and ceramics	3 249.4	179.2	13.5	2 750.2	161.1	10.9	3 095.9	174.1	13.7
Totally	**22 587.4**	**1 323.2**	**100.0**	**19 607.9**	**1 474.0**	**100.0**	**16 500.5**	**1 270.2**	**100.0**

Graph: Structure of import of household china and ceramics according to the assortment in 2013 (CZK)



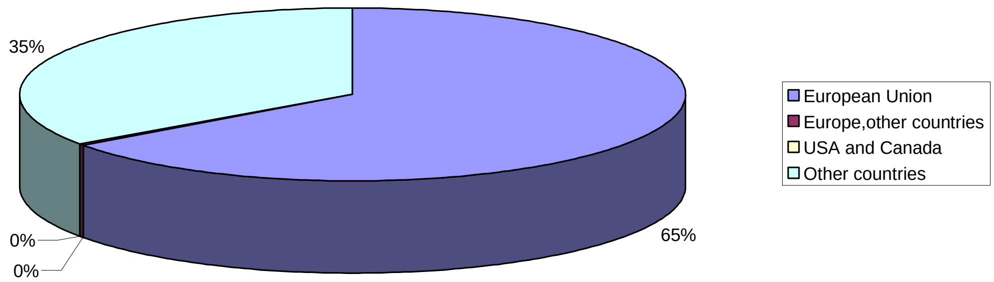
The household china shares with 62.3 %, household ceramics with 24.0 % and decorative and figural china and ceramics with 13.7 % on the import of this group assortment.

Table: Import of household china and ceramics according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	10 610.9	741.0	56.1	7 447.7	576.3	55.2	11 219.0	668.0	57.3
Europe,other countries	421.7	11.2	0.8	293.3	9.7	0.9	274.4	8.7	0.7
USA and Canada	0.7	0.3	0.0	12.7	1.7	0.2	1.2	0.4	0.0
Other countries	15 505.7	568.2	43.0	11 697.4	456.9	43.7	11 764.8	489.0	41.9
Totally	**26 539.0**	**1 320.7**	**100.0**	**19 451.1**	**1 044.6**	**100.0**	**23 259.4**	**1 166.1**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	10 295.9	669.0	50.6	8 563.9	756.1	51.3	9 170.7	824.3	64.9
Europe,other countries	211.8	10.8	0.8	142.2	4.3	0.3	53.6	3.1	0.2
USA and Canada	5.3	0.9	0.1	5.8	0.9	0.1	1.9	0.6	0.0
Other countries	12 074.4	642.5	48.6	10 896.0	712.7	48.4	7 274.3	442.2	34.8
Totally	**22 587.4**	**1 323.2**	**100.0**	**19 607.9**	**1 474.0**	**100.0**	**16 500.5**	**1 270.2**	**100.0**

Graph: Structure of import of household china and ceramics according to territories in 2013 (CZK)



The import from the European Union countries shared on total import with 64.9 %. The greatest importer was Germany, sharing on import from the European Union with 61.7 % (508.6 mill. CZK). The Other countries shared on import of household china and ceramics with 34.8 %. The greatest importer was China, sharing on import from the Other countries with 81.3 % (359.4 mill. CZK).

Technical ceramics and sanitary ware

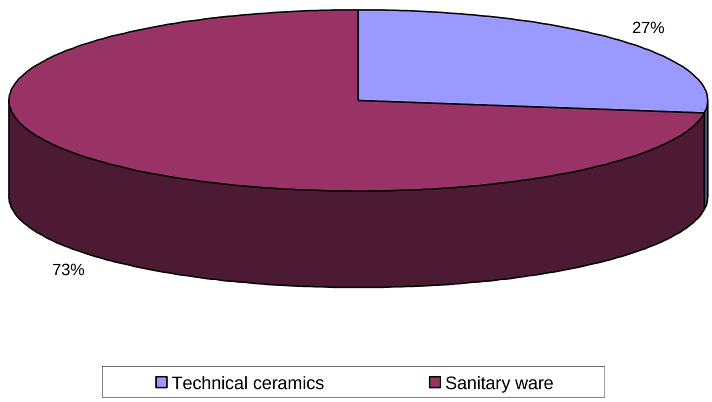
The technical ceramics and sanitary ware import was 1245.0 mill. CZK in 2013. The import of technical ceramics increased in comparison with 2012 by 15.7 % (168.9 mill. CZK).

Table: Import of technical ceramics and sanitary ware according to the assortment

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Technical ceramics	5 343.2	394.6	35.7	4 142.8	278.8	31.2	749.2	188.2	23.5
Sanitary ware	15 085.4	709.6	64.3	12 502.2	616.2	68.8	12 544.1	613.5	76.5
Totally	**20 428.6**	**1 104.2**	**100.0**	**16 645.0**	**895.0**	**100.0**	**13 293.3**	**801.7**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
Technical ceramics	4 408.0	463.1	39.8	4 360.6	296.7	27.6	3 616.7	339.5	27.3
Sanitary ware	18 574.2	699.5	60.2	14 559.2	779.4	72.4	13 457.2	905.5	72.7
Totally	**22 982.2**	**1 162.6**	**100.0**	**18 919.8**	**1 076.1**	**100.0**	**17 073.9**	**1 245.0**	**100.0**

Graph: Structure of import of technical ceramics and sanitary ware according to the assortment in 2013 (CZK)



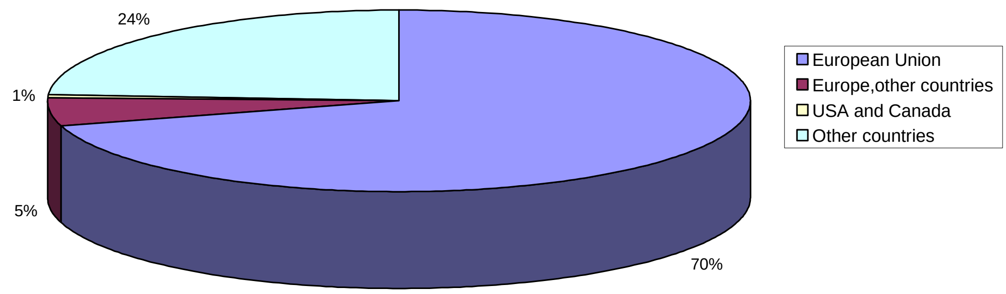
Sanitary ware and technical ceramics shared on the import with 72.7 % and 27.3 %, respectively, in 2013.

Table: Import of technical ceramics and sanitary ware according to territories

	2008			2009			2010		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	14 455.3	851.6	77.1	10 965.9	605.1	67.6	8 124.9	594.5	74.2
Europe,other countries	909.1	60.7	5.5	772.7	36.0	4.0	1 340.8	53.8	6.7
USA and Canada	22.6	28.9	2.6	1.9	22.2	2.5	2.5	18.0	2.2
Other countries	5 041.6	163.0	14.8	5 174.5	231.7	25.9	3 792.1	135.4	16.9
Totally	**20 428.6**	**1 104.2**	**100.0**	**16 915.0**	**895.0**	**100.0**	**13 260.3**	**801.7**	**100.0**

	2011			2012			2013		
	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)	Net (t)	Mill.CZK	Share (%)
European Union	16 844.1	905.4	77.9	13 248.2	805.8	74.9	11 663.7	877.6	70.5
Europe,other countries	1 141.4	51.4	4.4	1 179.4	63.9	5.9	1 179.7	62.4	5.0
USA and Canada	22.2	38.8	3.3	14.2	38.9	3.6	14.9	8.9	0.7
Other countries	4 974.5	167.0	14.4	4 478.0	167.5	15.6	4 215.6	296.1	23.8
Totally	**22 982.2**	**1 162.6**	**100.0**	**18 919.8**	**1 076.1**	**100.0**	**17 073.9**	**1 245.0**	**100.0**

Graph: Structure of import of technical ceramics and sanitary ware according to territories in 2013 (CZK)



In 2013 the import from the European Union countries shared on technical ceramics import with 68.3 %. The greatest importer was Germany. As far as sanitary ware the share of import from the European Union countries was 71.3 %. The greatest importers were Poland, Austria and Germany. The Other countries had the share 21.3 % on total import of sanitary ware. The greatest importers from the Other countries were China and Turkey.