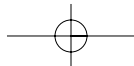
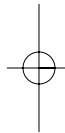
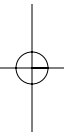
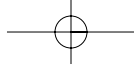


2005

# ANNUAL REPORT

Italian Technical and Economic Cement Association

ANNUAL MEETING OF THE MEMBERS  
Sorrento, June 28<sup>th</sup> 2005



## TABLE OF CONTENTS

<b>THE REFERENCE ECONOMIC PICTURE</b>	<b>5</b>
The international context	5
The Italian economy	6
Investments in construction	7
<b>PRODUCTION AND THE MARKET</b>	<b>11</b>
Cement consumption and production in Europe	11
Cement consumption and production in Italy	14
The nation's cement imports and exports	19
The distribution of production by technical characteristics and composition	24
Where cement goes	27
The structure of the sector	29
Energy consumption	33
The transport of cement	35
<b>ENVIRONMENTAL CODES</b>	<b>37</b>
<b>PROMOTIONAL ACTIVITIES AND MAKING THE PRODUCT KNOWN</b>	<b>43</b>
<b>ANNEXED STATISTICAL TABLES</b>	<b>53</b>



## THE INTERNATIONAL CONTEXT

In 2005 the world economy continued to expand, with high growth rates – near 5% — only a little less than the preceding year's. The principal motors of economic development at the world level were the USA and China. International trade in goods and services increased by seven percent (10.3% in 2004), while economic activities at the global level benefited from the continuing favourable financial conditions and from the impulse given by the economic expansion policies launched by a number of countries. These factors succeeded in compensating for the negative effect of increased energy prices. 2005 was in fact distinguished by strong tensions in international energy markets, which brought about a significant increase in average end-consumer prices, but did not exert any negative effect on the real trend of the world economy.

During that year too the growth gaps between the major geographic areas remained broad. In the United States economic activity, with a 3.5% growth, continued sustained, most especially by consumption. In Japan, the recovery in domestic demand made an important contribution to the growth of the GNP – 2.7% – after two years of substantial stagnation. The emerging countries chalked up development rates that were still quite high – seven percent – owing in particular to the growth in the Asiatic area and in the countries producing raw materials, whose quotations on international markets grew. In China growth actually grazed ten percent, with a strong contribution coming from the dynamics of the country's investments and exports.

In 2005 the GNP in the euro area slowed down its growth, settling at +1.3% (2.1% in 2004), with a considerable gap relative to the United States and to the emerging Asian countries. The slowdown in the economy, even if generalized, was of different magnitudes in the area's individual countries. In France, the growth of the GNP (+1.4%) was slightly higher than for the rest of the area, while Germany's (+0.9%) was penalized by the weakness of home consumption, which almost cancelled out the impulse given by foreign demand. To be noted too is Spain, where a growth in the GNP exceeding three percent was recorded.

In the euro area industrial production increased by 1.2%, while it decreased in Italy, as we shall see in the next section.

For 2006 the principal international agencies estimate a rate of development only slightly lower than 2005's. The size of the world's growth for the year underway will depend greatly on the behaviour of petroleum prices and therefore on the outcome of the growing international geopolitical tensions.



## THE ITALIAN ECONOMY

The development of Italy's macroeconomic picture in 2005 showed a stable GNP. This situation was the result of a dip in economic activity during the first part of the year, compensated by a slight recovery during the central months of 2005.

Consumption provided a weak contribution to increasing the GNP, while investments and net foreign demand made a negative one. The loss of competitiveness of the nation's products and unfavourable trends in our principal outlet markets contributed to braking exports, which increased by scarcely 0.3%. At the same time, imports grew sensibly. Therefore, the net contribution of the foreign sector to the growth of the GNP was negative.

In Italy industrial activity as a whole continued to lose ground. In 2005 industrial production, owing as well to the effect of a strongly negative first quarter (-3.9%), displayed an average annual dip of 1.8%, a statistic that, corrected on the basis of the number of working days, became an actual -0.8%. The dip in industrial production affected all the principal goods categories, but concentrated for the most part in consumer goods and in instrumental goods. As in previous years, the energy sector was among the most dynamic, while business in the traditional sectors was further downsized, these being most exposed to the competition of the emerging countries. Textiles, clothing, leather goods and footwear productions dropped by a further seven percent, after the dips of the last few years. The production crisis also affected the sectors of higher technology: electrical machinery, electrical equipment and means of transport all saw a reduction in production levels of almost five percent.

Trade with abroad as a whole made a negative contribution to the growth of the GNP. Despite the still sustained dynamics of world trade, in 2005 exports of goods and services grew by just 0.3%; as a consequence Italy's quota of world exports progressively dropped, while her imports increased. To be noted is the growth, at a sizeable rate, of imports from China (+18.1%), whose quota of the total of the nation's imports rose to 4.6%. On the whole 2005 chalked up a current accounts deficit of 21.2 billion euros, compared with the 12.8 of the previous year.

Employment, measured in terms of work units equivalent to full-time, dropped in 2005 for the first time since 1995 (-0.4%), after having stayed almost unchanged in 2004. The number of persons employed instead increased slightly (0.2%). The change in the trends of these two indicators owes most especially to the great increase in less-than-full-time work units and, to a lesser extent, to the greater resort had to the CIG [a sort of unemployment insurance – translator's note].

The first months of the year underway have shown signs of a pickup, which conduces to optimistic forecasts for the near future and an increase in the GNP, which for 2006 may be estimated at 1.5%.

## INVESTMENTS IN CONSTRUCTION

In 2005 construction continued growing for the seventh year in a row. From 1999 to date investments in construction in real terms have increased by 22.5%, as against an increase in the GNP during the same period of just nine percent.

The ISTAT office's national-accounting findings reveal construction investments still increasing, if slightly: up 0.5% in real terms, even if slowing down relative to the figure for 2004. Residential building construction went on playing a locomotive role for the sector's production levels, while the non-residential and public-works aspects displayed dips. Playing a non-negligible role in investments in infrastructures was the application of the two-percent ceiling on public administration expenditures.

According to ANCE data too the growth of construction in 2005 is to be attributed exclusively to investments in residential building construction (+2.2%), prevalently privately funded. The liveliness of the buildings market exerted positive effects both on production levels of new habitations (+2.5%) and on the upgrading of existing residential assets (+2%).

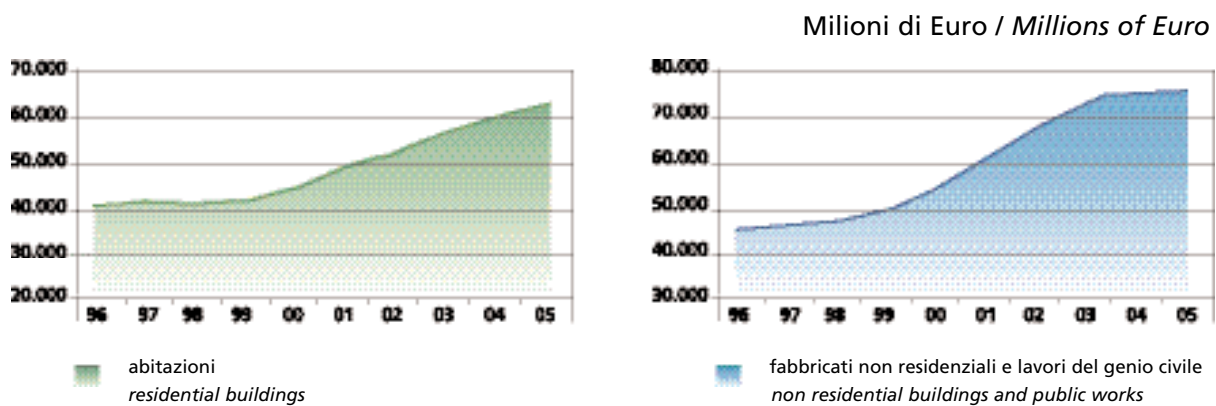
The latest observation on the nation's financial picture made by the National Contractors' Association noted something of a gap between private and public residential and non-residential construction (-1.3%). With reference to investments in the public sector, to be noted is the reversal of the trend in resources invested in public works, whether infra-structural or other, which in 2005 underwent a dip of 1.5%.

The growth in the number of those employed in construction continued, at the end of 2005 grazing two million persons. Building construction's contribution to developing employment was significant, considering that in 2005 one-half of the growth in the number of jobs in the entire economic system could be attributed to it.

According to latest ANCE estimates, construction investments will amount in 2006 to 143 billion euros, with an increase of 0.9%. In detail what is foreseen is a trend in the residential sector in line with the previous year's and a recovery in instrumental building construction that can be estimated at 0.6%. The major unknowns arise instead from the investments in infrastructural public works, whose development will depend heavily on the size of the resources assigned to the start-up or the completion of the strategic works already approved by CIPE (Interministerial committee for economic planning).



**INVESTIMENTI NELLE COSTRUZIONI DAL 1996 AL 2005**  
**INVESTMENTS IN CONSTRUCTIONS FROM 1996 THROUGH 2005**



**ANDAMENTO DEGLI INVESTIMENTI NELLE COSTRUZIONI**  
**EVOLUTION OF CONSTRUCTION INVESTMENTS**

	Milioni di Euro correnti Millions of current Euro			Variazioni % sull'anno precedente % Change over previous year			
	2003	2004	2005	2004		2005	
				(a)	(b)	(a)	(b)
<b>Costruzioni / Constructions</b>	125.017	131.893	137.833	0,9	5,5	0,5	4,5
- abitazioni / residential	51.959	55.635	61.485	2,8	7,1	6,2	10,5
- fabbricati non residenziali e opere pubbliche non residential buildings and public works	73.058	76.258	76.348	-0,4	4,4	-3,6	0,1

(a) in Euro concatenati; (b) in Euro correnti. / (a) in chained Euro; (b) in current Euro.  
 ISTAT, Conti Nazionali

THE REFERENCE ECONOMIC PICTURE





## CEMENT CONSUMPTION AND PRODUCTION IN EUROPE

From the not-quite-final data published by *Euroconstruct* it emerges that in 2005 European construction confirmed a growth trend, even if slowed down relative to the preceding year: +1.3% as against 2004's +2.2%.

The individual countries display very heterogeneous situations, which are reflected in proportion also in the behaviours of the various European cement markets, which once again demonstrates how construction investments and cement demand are in general correlated.

Among the principal European countries we note the strong growth in construction in Spain, while Germany showed a dip. Eastern Europe confirmed itself as the geographic area with the highest growth rates in construction, on the average exceeding five percent.

European cement demand was favourably influenced by the good trend of the construction sector, with special emphasis on public works and on new residential construction. According to CEMBUREAU (the European cement association), European cement demand grew by one percent for the fourth year in a row, with a total consumption of 231.8 million tons. If we consider all CEMBUREAU countries, the growth in consumption rises to three percent, owing to the strong increases in demand in Turkey and in Rumania.

In the same way as was brought out for the behaviour of construction investments, cement consumption too displayed heterogeneous behaviour in the individual countries. Among the principal markets is to be noted the sensible increase in consumption in Spain (+7.9%), the prime European market, where an infrastructural development plan is going ahead at full speed. More contained was the increase in demand in France (+2.6%), while in Germany consumption dropped by 7.6%, in Greece by 4.2% and in Portugal by 7.6%. To be noted is the strong increase in demand in the Scandinavian and Baltic countries (Norway, Sweden, Lithuania, and Estonia), where growth rates in two figures were chalked up. The market trends stated above were accompanied by a generalized increase too in per-capita consumption, which in the European Union reached 506 kg, a slight increase over the 502 kg of 2004.

Going on now to analyze cement production, this amounted to 239 million tons within the UE and to 292.7 million tons within the CEMBUREAU area, with increases of 2% and 4.5% respectively.



**PRODUZIONE DI CEMENTO IN EUROPA**  
**CEMENT PRODUCTION IN EUROPE**

000 t / 000 tonnes

	Produzione / Production		Variazioni % / Change %
	2005	2004	2005 / 2004
Spagna / Spain	50.000	46.600	7,3
Italia / Italy	46.411	46.052	0,8
Germania / Germany	31.880	32.823	-2,9
Francia / France	21.699	21.541	0,7
Regno Unito / UK	11.786	11.878	-0,8
Belgio, NL, L / Belgium, NL, L	11.499	11.304	1,7
Austria / Austria	4.769	4.034	18,2
Altri / Others	60.953	60.159	1,3
<b>Totale Paesi U.E. 25 / Total UE countries 25</b>	<b>238.997</b>	<b>234.391</b>	<b>2,0</b>
Turchia / Turkey	45.572	41.262	10,4
Altri / Others	8.159	4.523	80,4
<b>Totale Paesi Cembureau / Total Cembureau countries</b>	<b>292.728</b>	<b>280.176</b>	<b>4,5</b>

Fonte: Cembureau. / Source: Cembureau.

**RIPARTIZIONE GEOGRAFICA DELLA PRODUZIONE EUROPEA DAL 1999 FINO AL 2005**  
**GEOGRAPHIC DISTRIBUTION OF EUROPEAN PRODUCTION FROM 1999 THROUGH 2005**

000 t / 000 tonnes

	1999	2000	2001	2002	2003	2004	2005
Paesi UE 25 UE Countries 25	220.862	223.493	220.295	220.002	225.750	234.391	238.997
di cui Italia of which Italy	37.299	39.020	39.804	41.417	43.462	46.052	46.411
Altri Paesi europei Other European countries	41.340	43.140	37.069	39.949	41.603	45.785	53.731
<b>Totale Paesi Cembureau / Total Cembureau countries</b>	<b>262.202</b>	<b>266.633</b>	<b>257.364</b>	<b>259.951</b>	<b>267.353</b>	<b>280.176</b>	<b>292.728</b>

Fonte: Cembureau. / Source: Cembureau.

## PRODUCTION AND MARKET

For the individual countries, to be noted is the sensible increase in production in Spain, where the record level of 50 million tons produced was achieved (+7.3%) and in Turkey (+10.4%), with a considerable share of production assigned to covering cement demand for reconstruction in Iraq. For the other countries production trends substantially followed the development of home consumption with the exception of Germany, where the dip in production was more contained compared with the figures recorded for consumption, which shows a propensity to export, typical of this country.

CONSUMI DI CEMENTO PRO-CAPITE IN EUROPA  
PER CAPITA CEMENT CONSUMPTIONS IN EUROPE

	2005	2004	Variazioni % / Change % 2005 / 2004
			kg
Spagna / Spain	1.241	1.166	6,4
Lussemburgo / Luxembourg	1.180	1.221	-3,4
Irlanda / Ireland	1.176	1.000	17,6
Grecia / Greece	921	963	-4,4
Portogallo / Portugal	822	867	-5,2
Italia / Italy	794	792	0,3
Austria / Austria	646	565	14,3
Svizzera / Switzerland	611	569	7,4
Belgio / Belgium	563	557	1,1
Turchia / Turkey	481	426	12,9
Norvegia / Norway	386	327	18,0
Francia / France	373	366	1,9
Germania / Germany	326	353	-7,6
Finlandia / Finland	323	319	1,3
Paesi Bassi / The Netherlands	319	313	1,9
Danimarca / Denmark	307	296	3,7
Regno Unito / Uk	212	216	-1,9
Svezia / Sweden	209	192	8,9
Totale Europa 25 / Total for Europe 25	506	502	0,8

Fonte: Cembureau. / Source: Cembureau.



## CEMENT PRODUCTION AND CONSUMPTION IN ITALY

2005 marked a new record for the nation's cement production, which increased for the ninth consecutive year, even if with growth rates lower than last year's.

The amount of cement produced in 2005 was 46 million 411 thousand tons (+0.8%), a figure that would have been higher except that adverse weather during the first months of the year strongly penalized market demand. During the first quarter in fact production dipped by four percent, with a minimum of -8.4% in February, to then pick up starting from spring, a period when the highest growth rates were seen.

Analysis of production trends at the geographic level brings out that, unlike last year, growth was not a feature of the entire nation, there being a slight dip in the north and in insular Italy, compensated by the good trends seen in the center and in southern Italy, in which production increases between two and three percent were seen.

Within the areas some divergence was seen in the individual regions. The regions having the highest production increases were the Molise, Umbria and the Friuli-Venezia-Giulia, whose growth exceeded seven percent, followed by Basilicata, Puglia and Emilia Romagna, whose increases settled at four percent. To be noted is that a part of the increase seen in the Emilia Romagna (+3.6%) can be attributed to the start-up of production of a new crushing plant.

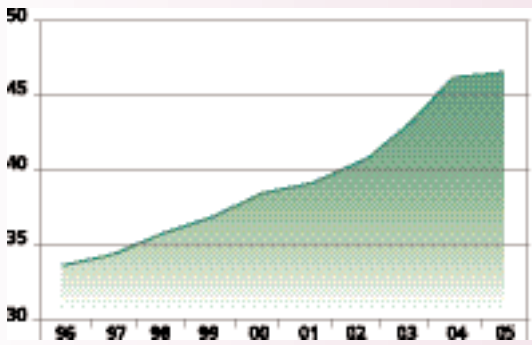
Among the regions exhibiting the greatest drops in production we note Liguria, Sardinia, the Piedmont and the Veneto. Campania's dip was contained for the year, owing to the recovery of the second half, making up for the first months of 2005, when production activity underwent slowdowns (-16% in the first quarter). These owed to the unavailability of raw materials, itself due to the arrest of production imposed in some quarries in Caserta, which was subsequently removed.

The nation's cement consumption settled at levels somewhat lower than production, with a very slight dip, but anyway lower than one percent (-0.7%). This slight difference is the combined effect of the negative balance of trade with abroad and, to a lesser extent, of the change in stocks, which at the end of 2005 amounted to 1.3 million tons, an increase of 100 thousand tons. Clinker production in 2005, somewhat higher than 33.1 million tons and substantially stable compared with the preceding year, did not cover the nation's needs, with a consequent increase in imported-clinker consumption.

PRODUCTION AND MARKET

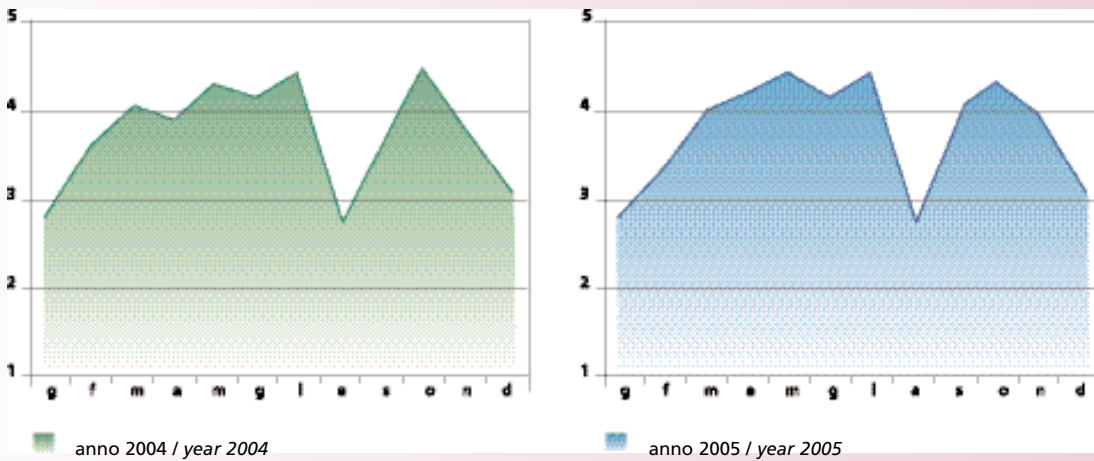
PRODUZIONE DI CEMENTO DAL 1996 AL 2005  
CEMENT PRODUCTION FROM 1996 THROUGH 2005

Milioni di tonnellate / Millions of tonnes



PRODUZIONE MENSILE DI CEMENTO DAL 2004 AL 2005  
MONTHLY CEMENT PRODUCTION FROM 2004 THROUGH 2005

Milioni di tonnellate / Millions of tonnes





PRODUZIONE DI CEMENTO 2005 E 2004 PER REGIONI E PER GRANDI AREE TERRITORIALI  
CEMENT PRODUCTION IN 2005 AND 2004 BY REGION AND BY LARGE TERRITORIAL AREAS

t / tonnes

	2005	2004	Variazioni % / change % 2005 / 2004
Piemonte	3.846.331	3.966.041	-3,0
Liguria	113.672	141.118	-19,4
Lombardia	6.944.665	6.971.272	-0,4
Veneto	5.121.401	5.232.638	-2,1
Friuli-Venezia Giulia	1.495.929	1.397.162	7,1
Trentino-Alto Adige	560.258	562.731	-0,4
Emilia-Romagna	3.889.385	3.753.937	3,6
<b>Settentrione / North</b>	<b>21.971.641</b>	<b>22.024.899</b>	<b>-0,2</b>
Toscana	2.426.192	2.428.730	-0,1
Marche	428.888	431.718	-0,7
Umbria	3.010.327	2.807.713	7,2
Lazio	3.074.508	3.095.229	-0,7
<b>Centro / Centre</b>	<b>8.939.915</b>	<b>8.763.390</b>	<b>2,0</b>
Abruzzo	1.197.310	1.162.183	3,0
Molise	1.167.726	1.082.518	7,9
Campania	2.394.678	2.416.141	-0,9
Puglia	3.422.969	3.288.471	4,1
Calabria	1.207.010	1.212.478	-0,5
Basilicata	1.134.901	1.092.802	3,9
<b>Meridione / South</b>	<b>10.524.594</b>	<b>10.254.593</b>	<b>2,6</b>
Sardegna	1.476.517	1.612.230	-8,4
Sicilia	3.498.719	3.397.569	3,0
<b>Isole / Islands</b>	<b>4.975.236</b>	<b>5.009.799</b>	<b>-0,7</b>
<b>Totale / Total</b>	<b>46.411.386</b>	<b>46.052.681</b>	<b>0,8</b>

## PRODUCTION AND MARKET

As we shall see in the chapter devoted to international trade, clinker coming from abroad in 2005 increased by almost four percent, bringing the level of total imports to almost six times that for the year 2000.

The relationship between clinker consumed (35.9 million tons) and cement produced dropped further during 2005, sinking to 77.4%, a figure among the lowest at the world level and the lowest absolutely in Europe.

The production of hydraulic binders for construction (LIC) on the basis of the ISTAT figures for the first half, should close 2005 at around 1.44 million tons, a slight dip below the previous year. For 2006 the cement market should maintain an uptrend. The data on the sector's financial situation during the first months of this year allow a glimpse of high probabilities that 2006 will be the tenth consecutive year of growth. Forecasts supported by the latest estimates on construction investments envisage a growth for 2006 of close to one percentage point.

### GIACENZE, CONSUMI E CONSEGNE INTERNE DOMESTIC STOCKS, CONSUMPTIONS AND DELIVERIES

	Giacenze / Stocks		Variazioni % Change % 2005 / 2004		Consumi interni Domestic consumptions	Variazioni % Change % 2005 / 2004	Consegne interne Domestic deliveries		Variazioni % Change % 2005 / 2004
	cemento cement	clinker clinker	cemento cement	clinker clinker			cemento cement	cemento cement	
	t / tonnes								
2005	1.300.625	2.702.014	8,4	9,3	46.051.596	-0,7	43.884.366	-0,4	
2004	1.199.601	2.471.218			46.357.983		44.081.870		


**PRODUZIONE MENSILE / MONTHLY PRODUCTION**

t / tonnes

	2005	2004	Variazioni % / Change % 2005 / 2004
Gennaio / January	2.873.488	2.828.628	1,6
Febbraio / February	3.267.192	3.565.623	-8,4
Marzo / March	3.964.373	4.116.383	-3,7
Aprile / April	4.180.410	3.980.129	5,0
Maggio / May	4.635.124	4.436.008	4,5
Giugno / June	4.427.626	4.225.713	4,8
Luglio / July	4.629.252	4.540.839	1,9
Agosto / August	2.891.532	2.815.507	2,7
Settembre / September	4.084.987	4.188.153	-2,5
Ottobre / October	4.357.963	4.471.334	-2,5
Novembre / November	3.987.944	3.708.516	7,5
Dicembre / December	3.111.495	3.175.848	-2,0
<b>Totale / Total</b>	<b>46.411.386</b>	<b>46.052.681</b>	<b>0,8</b>

**PRODUZIONE DI CEMENTO PER ABITANTE (\*)  
CEMENT PRODUCTION PER INHABITANT (\*)**

kg

	2005	2004	Variazioni % / Change % 2005 / 2004
Settentrione / North	831	838	-0,8
Centro / Central	792	783	1,1
Meridione / South	747	730	2,3
Isole / Islands	746	753	-0,9
<b>Media / Average</b>	<b>794</b>	<b>792</b>	<b>0,3</b>

(\*) Rapporto produzione-popolazione / Production-resident population ratio

## THE NATION'S CEMENT EXPORTS AND IMPORTS

The intensity of trade with abroad confirms a trend toward our sector's globalization and geographic integration, one that has been going on for some years.

Within this context Italy, with her negative balance of trade, takes shape as a net importer of clinker and cement for the fifth year in a row: on the whole, five million tons imported, compared with 2.4 million tons exported. The situations differ however for the two products: while cement is both imported and exported, with a slight predominance of the former, clinker is imported only, prevalently from the Mediterranean basin. Starting from this year, the traditional countries from which we have imported have a competitor: China, already an important supplier of Spain. Italy, a market suffering from a structural lack in its clinker supply, is particularly exposed to Chinese imports. Our country's geographic position lies in fact along the route of the ships sailing toward Spain, where China delivers 2.5 million tons per year of clinker (source: Eurostat).

With regard to cement exports, in 2005 they amounted to 2.4 million tons (5.2% of the nation's production), with a slight recovery after the sensible decreases over the past few years. This increase held good for every geographic area except for the center, an area in any event little concerned with cement exports.

The nation's principal foreign cement market goes on being the Mediterranean basin area, where considerable weight is packed by the developing countries, such as Albania, or by those having production-capacity structural lacks, such as Malta. These two states, together with Spain, today account for more than 70 per cent of Italy's exports.

Going on to imports, clinker and cement flows from abroad during 2005 reached the record level of the year before, grazing 15 million tons. While cement imports, 2.2 million tons, dropped (with the exception of aluminous cement and blast furnace cement) the demand for foreign clinker goes on recording significant increases, bringing imports to the record level of 2.8 million tons. As the table shows, the regions most concerned are Liguria, the Veneto, Puglia and Sicily, where 65% of the nation's imports are concentrated, this too because of the important ports they possess.

On analyzing the areas of provenance of cement, it appears that imports mostly come from a few countries of origin. The quotas of the first three (Turkey — Europe's principal exporter — Greece and Croatia) represent three-quarters of Italy's cement exports. To be noted anyway is the decrease in imports from Turkey, which in 2005 exported a significant portion of its production to Iraq.

With regard to clinker, Egypt and Turkey account on the whole for almost 70% of the nation's imports. As we noted, China joined our traditional countries of provenance; she is in fourth place among the most important countries of origin of imported clinker. To be noted is that more than 80% of clinker imports come from extra-UE countries, not signatories of the Kyoto protocol and thus not subject to (CO<sub>2</sub>) emissions constraints. Among the principal world exporters Thailand confirmed its first place in 2005 as well, followed by Turkey, Japan and India, and joined this year by China.



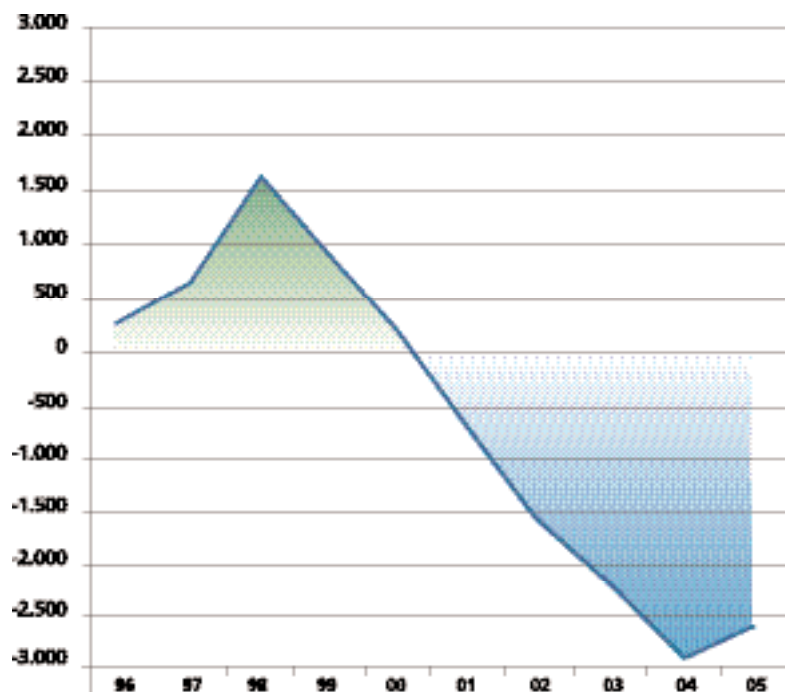
**ESPORTAZIONI E IMPORTAZIONI DI CEMENTO E CLINKER**  
**CEMENT AND CLINKER EXPORTS AND IMPORTS RELATIVE TO ITALY**

000 t / 000 tonnes

	Esportazioni / Exports				Importazioni / Imports			
	cemento cement	clinker clinker	Totale Total	% di produzione esportata % of production exported	cemento cement	clinker clinker	Totale Total	% della produzione % of production
1996	1.524	127	1.651	4,9	1.277	27	1.304	3,9
1997	2.005	131	2.136	6,3	1.384	149	1.533	4,5
1998	2.584	147	2.731	7,6	1.084	101	1.185	3,3
1999	2.480	92	2.572	6,9	1.457	220	1.677	4,5
2000	2.466	95	2.561	6,6	1.793	547	2.340	6,0
2001	2.477	100	2.577	6,5	2.219	1.001	3.220	8,1
2002	2.274	83	2.357	5,7	2.101	1.777	3.878	9,4
2003	2.178	55	2.233	5,1	2.202	2.323	4.525	10,4
2004	1.999	7	2.006	4,4	2.276	2.720	4.996	11,5
2005	2.426	7	2.433	5,2	2.167	2.829	4.996	10,8

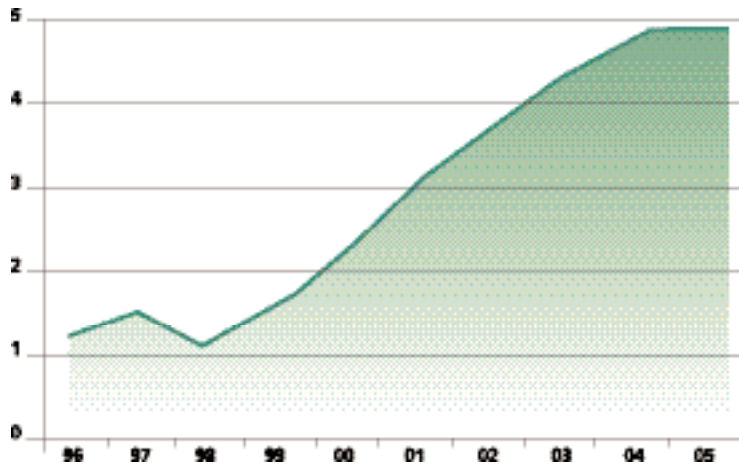
**ANDAMENTO DEL SALDO COMMERCIALE CON L'ESTERO DI CEMENTO E CLINKER DAL 1996 AL 2005**  
**EXTERNAL TRADE PERFORMANCE FOR CEMENT AND CLINKER FROM 1996 THROUGH 2005**

Migliaia di tonnellate / Thousands of tonnes



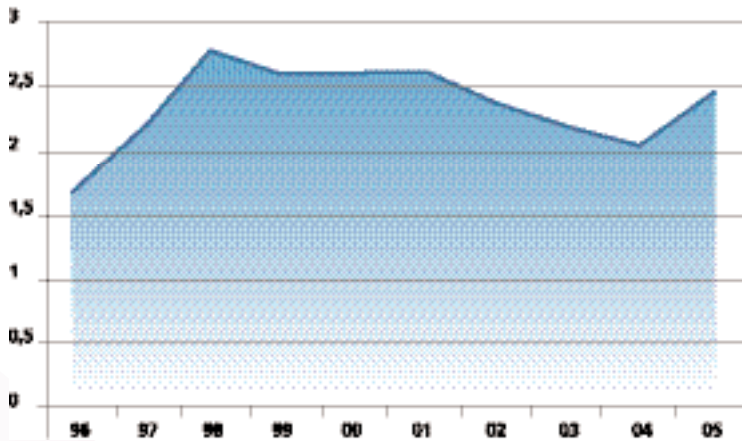
ANDAMENTO DELLE IMPORTAZIONI NAZIONALI DI CEMENTO E CLINKER DAL 1996 AL 2005  
NATIONAL CEMENT AND CLINKER IMPORTS FROM 1996 THROUGH 2005

Milioni di tonnellate / Millions of tonnes



ANDAMENTO DELLE ESPORTAZIONI NAZIONALI DI CEMENTO E CLINKER DAL 1996 AL 2005  
NATIONAL CEMENT AND CLINKER EXPORTS FROM 1996 THROUGH 2005

Milioni di tonnellate / Millions of tonnes





**IMPORTAZIONI DI CEMENTO PER REGIONI NEL 2005**  
**CEMENT IMPORT IN 2005 BY REGION**

t / tonnes

	Importazioni / Imports	Produzione / Production	% della produzione % of production
Piemonte	175.338	3.846.331	4,6
Liguria	438.157	113.672	385,5
Lombardia	95.295	6.944.665	1,4
Veneto	531.745	5.121.401	10,4
Friuli-Venezia Giulia	137.083	1.495.929	9,2
Trentino-Alto Adige	30.155	560.258	5,4
Emilia-Romagna	27.048	3.889.385	0,7
<b>Settentrione / North</b>	<b>1.434.821</b>	<b>21.971.641</b>	<b>6,5</b>
Toscana	10.274	2.426.192	0,4
Marche	46.549	428.888	10,9
Umbria	10.001	3.010.327	0,3
Lazio	45.805	3.074.508	1,5
<b>Centro / Centre</b>	<b>112.629</b>	<b>8.939.915</b>	<b>1,3</b>
Abruzzo	5.059	1.197.310	0,4
Molise	0	1.167.726	0,0
Campania	21.326	2.394.678	0,9
Puglia	301.630	3.422.969	8,8
Calabria	99.863	1.207.010	8,3
Basilicata	0	1.134.901	0,0
<b>Meridione / South</b>	<b>427.878</b>	<b>10.524.594</b>	<b>4,1</b>
Sardegna	0	1.476.517	0,0
Sicilia	191.903	3.498.719	5,5
<b>Isole / Islands</b>	<b>191.903</b>	<b>4.975.236</b>	<b>3,9</b>
<b>Totale / Total</b>	<b>2.167.231</b>	<b>46.411.386</b>	<b>4,7</b>

## PRODUCTION AND MARKET

**ESPORTAZIONI DI CEMENTO E CLINKER DI ALCUNI PAESI DELL'EUROPA**  
**CEMENT AND CLINKER EXPORTS FROM EUROPEAN COUNTRIES**

000 t / 000 tonnes

	2005	% della produzione % of production	2004	% della produzione % of production	Variazioni % Change % 2005 / 2004
Turchia / Turkey	10.523	23,1	10.672	25,9	-1,4
Germania / Germany	6.238	19,6	5.942	18,1	5,0
Belgio, NL, L / Belgium, NL, L	3.963	34,5	4.016	35,5	-1,3
Italia / Italy	2.433	5,2	2.006	4,4	21,3
Spagna / Spain	1.846	3,7	1.525	3,3	21,0
Francia / France	1.625	7,5	1.760	8,2	-7,7
Regno Unito / UK	533	4,5	359	3,0	48,5
Austria / Austria	251	5,3	214	5,3	17,3

**MAGGIORI ESPORTATORI MONDIALI DI CEMENTO**  
**MAJOR WORLD CEMENT EXPORTERS**

Milioni di t / Millions of tonnes

	2005	2004
Tailandia / Thailand	11,5	11,2
Turchia / Turkey	10,5	10,6
Giappone / Japan	10,1	10,3
India / India	8,0	9,6
Cina / China	8,0	6,0
Indonesia / Indonesia	7,0	7,0
Corea / Korea	6,9	3,0
Canada / Canada	6,4	6,4
Germania / Germany	6,2	5,9
Taiwan / Taiwan	5,7	5,7
Egitto / Egypt	4,2	4,0
Malesia / Malaysia	2,5	2,4
Italia / Italy	2,4	2,0
Spagna / Spain	1,8	1,5
Filippine / Philippines	1,6	1,6
Francia / France	1,6	1,7



## DISTRIBUTION OF PRODUCTION BY TECHNICAL CHARACTERISTICS AND COMPOSITION

Regarding the distribution of production by cement type, 2005 exhibited no substantial variations, displaying only slight adjustments relative to 2004 and confirming some dynamics of cement demand already acting over the past ten years.

With reference to cement types, Portland composite (CEM II) is the most produced cement type, its share being 76.7%. Within this category the growth of Portland limestone-composite continues, which confirms it as the most-requested cement in Italy. In second place for importance of production share we find pozzolana cement (CEM IV), which reversed its trend over the past few years and closed 2005 with a share of 12.2%. The relative weight of Portland cement (CEM I) instead further descended, to seven percent. No particular changes in the relative weights of the other types of cement were found.

This structural characteristic of the composition of cement types produced lies at the basis of the low clinker/cement ratio typical of our country and lower than the European average. Cement manufacturers over the past few years have intensively sought product formulations able to assure performances suited to demand, seeking at the same time to minimize clinker content.

Going on now to analyze production distribution by strength class, it is to be noted how, in 2005, classes 42.5, and 52.5, with more than 22 million tons, recorded a further increase in their relative weights. Therefore, class 32.5 underwent a slight contraction in its weight. Thus was consolidated in our country the trend toward an ever greater use of high- and very-high-strength cements. Their weight on the total of production increased over the past ten years by more than ten percent, even if this growth was not homogeneous over the nation's territory, owing to the various construction traditions that connote our country.

The reasons that over the years have pushed toward an ever greater use of high- and very-high-strength cements are to be sought not simply in their higher mechanical performance but also in the greater speed of construction they allow, a factor that is becoming ever more important in construction.

## PRODUCTION AND MARKET

**ANDAMENTO DELLA RIPARTIZIONE PER TIPI DAL 1996 AL 2005**  
**DISTRIBUTION BY TYPE FROM 1996 THROUGH 2005**

	%				
	CEM I	CEM II	CEM III	CEM IV	CEM V
1996	7,97	72,53	3,09	16,16	0,25
1997	8,68	71,21	3,62	16,13	0,36
1998	10,42	71,46	2,63	15,14	0,35
1999	10,08	72,83	3,06	13,52	0,51
2000	9,61	74,41	2,67	12,42	0,89
2001	8,93	76,01	2,87	11,44	0,75
2002	8,98	76,83	3,11	10,45	0,63
2003	8,51	76,98	3,26	10,58	0,67
2004	8,54	76,95	3,49	10,17	0,85
2005	7,03	76,75	3,42	12,18	0,62

**2005 RIPARTIZIONE PER TIPI DI CEMENTO**  
**2005 DISTRIBUTION BY CEMENT TYPE**

tipo / type	t / tonnes	%
I	3.262.721	7,03
II/A-S	1.146.361	2,47
II/B-S	1.178.849	2,54
II/A-P	232.057	0,50
II/B-P	129.952	0,28
II/A-L; II/A-LL	22.504.881	48,49
II/B-L; II/B-LL	6.627.546	14,28
II/A-M	148.516	0,32
II/B-M	3.652.576	7,87
III/A	1.489.805	3,21
III/B	97.464	0,21
IV/A	2.223.105	4,79
IV/B	3.429.802	7,39
V/A	287.751	0,62
<b>Totale / Total</b>	<b>46.411.386</b>	<b>100,00</b>



2005 RIPARTIZIONE PER GRANDI CLASSI NELLE AREE GEOGRAFICHE  
2005 DISTRIBUTION BY BROAD CLASSES

	32,5 32.5		42,5 e 52,5 42.5 and 52.5	
	t / tonnes	%	t / tonnes	%
Settentrione / North	13.397.418	61,0	8.574.223	39,0
Centro / Central	3.742.812	41,9	5.197.103	58,1
Meridione / South	4.948.433	47,0	5.576.161	53,0
Isole / Islands	2.218.271	44,6	2.756.965	55,4
Totale / Total	24.306.934	52,4	22.104.452	47,6

DISTRIBUZIONE DELLA PRODUZIONE PER CLASSI DI RESISTENZA  
DISTRIBUTION OF CEMENT PRODUCTION BY STRENGTH CLASSES

	%										
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
32,5 / 32.5	64,0	63,2	60,6	59,9	59,1	58,2	55,3	53,9	52,8	52,4	
42,5 e 52,5 / 42.5 and 52.5	36,0	36,8	39,4	40,1	40,9	41,8	44,7	46,1	47,2	47,6	

## WHERE CEMENT GOES

Going on now to analyze the channels toward which the product goes on output from the cement works (the intermediate destinations), it comes out that during the year in question no prominent changes were observed. Premixed-concrete is confirmed as the area of greatest relative importance; concrete plants, with about 22.9 million tons, took 48.6% of the cement that left the cement works, a value substantially in line with 2004's.

The resale channel was confirmed too as the product's second-ranking destination, with a 23.2% share, while precasting, with 5.5 million tons, represented 11.2% of cement destinations. Precasting still displayed a slight dip owing to the dynamics of the instrumental building-construction market, which is the construction sector at this time that is going through the least felicitous moment and that, compared with residential building construction, has greater demand for structural precastings.

Aside from exports, for which we refer the reader to the appropriate section, the other channels of destination display product-absorption shares substantially in line with the preceding year and in particular: construction companies, 7% and premixers, 3.7%. From all this it can be concluded that, after the important changes that between 1996 and the first years of the 2000s affected cement intermediate-destination flows, the situation today seems to have reached a general normal equilibrium, one not destined to change significantly in the near term.

With regard to cement end destinations, in July 2005 the publication *Cemento e costruzioni in Italia* was presented, the sixth edition of the AITEC investigation into final cement destinations. This survey, which confirms the importance of the role cement goes on playing within Italian construction, brings out that 36% of cement production goes to residential building construction, 30.4% to instrumental building construction (prevalently industrial) and 33.5% to public works and infrastructures. For more details on the results and on the survey methodology the reader is referred to the association's website ([www.aitecweb.com](http://www.aitecweb.com)).



**2005 DESTINAZIONI INTERMEDIE DEL CEMENTO**  
**2005 CEMENT INTERMEDIATE DESTINATIONS**

	t / tonnes	%
Centrali di betonaggio / <i>Ready-mixed</i>	22.573.391	48,6
Rivenditori / <i>Retail sales</i>	10.752.410	23,2
Prefabbricatori / <i>Pre-cast</i>	5.206.805	11,2
Imprese di costruzione / <i>Construction firms</i>	3.225.037	7,0
Esportazione / <i>Export</i>	2.425.996	5,2
Premiscelatori / <i>Premixing</i>	1.735.786	3,7
Altre destinazioni / <i>Other destinations</i>	491.961	1,1

**ANDAMENTO DELLE DESTINAZIONI INTERMEDIE DEL CEMENTO DAL 1996 AL 2005**  
**BEHAVIOUR OF INTERMEDIATE CEMENT DESTINATIONS FROM 1996 THROUGH 2005**

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Centrali di betonaggio <i>Ready-mixed</i>	42,2	43,3	43,7	44,2	46,0	44,5	47,0	48,7	48,8	48,6
Rivenditori <i>Retail sales</i>	29,3	27,7	26,2	25,7	24,5	23,0	21,4	20,3	22,8	23,2
Prefabbricatori <i>Pre-cast</i>	13,2	12,2	12,8	13,4	13,2	12,6	13,1	12,5	11,9	11,2
Imprese di costruzione <i>Construction firms</i>	8,7	8,6	8,1	7,5	7,3	9,5	8,7	8,8	7,1	7,0
Esportazione <i>Export</i>	4,5	5,8	7,2	6,6	6,3	6,2	5,5	5,0	4,3	5,2
Premiscelatori <i>Premixing</i>	n.d./n.a.	n.d./n.a.	n.d./n.a.	n.d./n.a.	n.d./n.a.	3,2	3,1	3,9	3,9	3,7
Altre destinazioni <i>Other destinations</i>	2,1	2,4	2,0	2,6	2,7	1,0	1,2	0,8	1,2	1,1

## THE CEMENT SECTOR STRUCTURE

The structural profile of the Italian cement industry seems to have reached a situation of equilibrium after the significant changes of the last ten or fifteen years. During this period we assisted at a rationalization and restructuring of the sector both production-wise and company-wise, with the gradual closing of older less efficient plants and the complete abandonment of production technologies requiring a larger unit energy consumption ("wet-way process").

In very brief summary, the nation's cement sector exhibits the following characteristics:

- a capillary territorial distribution of its production apparatus
- a relatively large number of companies;
- a very high technological level of the plants.

With the start-up in Emilia Romagna of production of a new operator in the crushing of cement the Italian cement-producing firms at the end of 2005 numbered twenty-six, significantly more than in other European countries, where the processes of company concentration and merger were more accentuated. Italy's cement sector is distinguished still today by the coexistence of very heterogeneous company types: large transnational groups, middle-size companies operating nationally and small companies active for the most part at the local level.

### RIPARTIZIONE DELLA PRODUZIONE TRA LE MAGGIORI AZIENDE NEL 2005 PRODUCTION PERCENTAGE OF THE MAJOR COMPANIES IN 2005

		%
<i>Gruppi e aziende associate AITEC / Groups and AITEC members companies</i>		
Italcementi	(1 azienda e 34 unità / 1 company and 34 plants)	27,7
Buzzi Unicem	(1 azienda e 12 unità / 1 company and 12 plants)	17,4
Colacem	(1 azienda e 9 unità / 1 company and 9 plants)	14,5
Cementir	(1 azienda e 4 unità / 1 company and 4 plants)	7,1
Holcim	(1 azienda e 3 unità / 1 company and 3 plants)	6,2
Cementi Rossi	(1 azienda e 4 unità / 1 company and 4 plants)	5,6
Sacci	(2 aziende e 4 unità / 2 companies and 4 plants)	3,6
Lafarge Adriasebina	(1 azienda e 2 unità / 1 company and 2 plants)	2,5
Cementizillo	(1 azienda e 2 unità / 1 company and 2 plants)	2,5
Monselice	(1 azienda e 1 unità / 1 company and 1 plant)	1,8
Cal.me	(1 azienda e 3 unità / 1 company and 3 plants)	1,3
Cementi Moccia	(1 azienda e 1 unità / 1 company and 1 plant)	0,6
Cementi della Lucania	(1 azienda e 1 unità / 1 company and 1 plant)	0,4
Altre aziende / Other firms	(12 aziende e 14 unità / 12 companies and 14 plants)	8,8
<b>Totale / Total</b>	<b>(26 aziende e 94 unità / 26 companies and 94 plants)</b>	<b>100,0</b>



The industrial fabric consists of a total of 94 production units distributed in capillary fashion over the whole territory of the nation, with the sole exception of Val d'Aosta, the only region whose territory has not a single production plant.

In the fifty-nine complete-cycle plants, after the reduction of the past years (fifteen percent fewer at the end of the '90s) the active kilns dropped to eighty and all use the dry or semi-dry technology. The prevalent plant typology is the "cyclone" kiln, which means lower specific energy consumption. From these today 65% of the nation's production is obtained, as against the 40% at the start of the 90s. Crushing-only plants instead number 35 today.

**RIPARTIZIONE DELLE CEMENTERIE PER CLASSI PRODUTTIVE NEL 2005**  
**CEMENT PLANTS DISTRIBUTION BY PRODUCTION OUTPUT IN 2005**

	n.	t / tonnes	%
Fino a 100.000 tonn. / Up to 100,000 tons	15	422.494	0,9
da 100.001 a 300.000 tonn. / from 100,001 to 300,000 tons	24	4.642.426	10,0
da 300.001 a 600.000 tonn. / from 300,001 to 600,000 tons	23	10.394.184	22,4
da 600.001 a 1.000.000 tonn. / from 600,001 to 1,000,000 tons	17	12.602.771	27,2
oltre 1.000.000 di tonn. / over 1,000,000 tons	15	18.349.511	39,5
<b>Totale / Total</b>	<b>94</b>	<b>46.411.386</b>	<b>100,0</b>

**FORNI DI COTTURA**  
**SINTERING KILNS**

	2005	2004
Forni attivi / Active kilns	80	80
RS Rotanti a via secca e semisecca / RS-Rotary, dry and semidry type	80	80
RH Rotanti a via umida / RH-Rotary, wet type	0	0

## PRODUCTION AND MARKET

From the territorial standpoint, 46% of the production units are located in the north of Italy, 17% in the center and the remaining 37% in the south and the islands.

The share of production gained by the large-size plants (i.e. capacities exceeding one million tons per year) is further increasing. These production units today cover 40% of production, compared with 27% at the end of the '90s, demonstration of a progressively increasing production efficiency, aimed at achieving economies of scale and at maximizing energy and emissions efficiency.

DISTRIBUZIONE TERRITORIALE DELLE UNITÀ PRODUTTIVE NEL 2005  
TERRITORIAL DISTRIBUTION OF PLANTS IN 2005

	Ciclo completo <i>Full cycle</i>	Sola macinazione <i>Grinding only</i>	Totale <i>Total</i>
Piemonte	3	6	9
Liguria	0	1	1
Lombardia	7	1	8
Veneto	6	5	11
Friuli-Venezia Giulia	3	1	4
Trentino-Alto Adige	2	2	4
Emilia-Romagna	3	4	7
<i>Settentrione / North</i>	<i>24</i>	<i>20</i>	<i>44</i>
Toscana	4	3	7
Marche	1	1	2
Umbria	3	0	3
Lazio	2	2	4
<i>Centro / Centre</i>	<i>10</i>	<i>6</i>	<i>16</i>
Abruzzo	3	0	3
Molise	2	0	2
Campania	4	1	5
Puglia	3	3	6
Calabria	3	2	5
Basilicata	3	0	3
<i>Meridione / South</i>	<i>18</i>	<i>6</i>	<i>24</i>
Sardegna	2	2	4
Sicilia	5	1	6
<i>Isole / Islands</i>	<i>7</i>	<i>3</i>	<i>10</i>
<b>Totale / Total</b>	<b>59</b>	<b>35</b>	<b>94</b>


**AZIENDE E UNITÀ PRODUTTIVE**  
**COMPANIES AND PLANTS**

	2005	2004
Aziende / Companies	26	25
Unità produttive / Plants	94	93
di cui a ciclo completo of which, full-cycle	59	58
di cui officine di macinazione of which, grinding plants	35	35

**RIPARTIZIONE DELLA PRODUZIONE PER CLASSI AZIENDALI**  
**PRODUCTION BY CLASSES OF COMPANIES**

	n.	%
Inferiori a 500.000 tonn. Less than 500,000 tonnes	13	4,0
Da 500.000 a 3.000.000 tonn. From 500,000 to 3,000,000 tonnes	9	29,3
Oltre 3.000.000 di tonn. Over 3,000,000 tonnes	4	66,7
Totale / Total	26	100,0

## ENERGY CONSUMPTION

2005 was a year of strong tensions in the international energy products market, due not only to market factors but also to the well-known international political situation. Petroleum prices, to which are linked fuel and electrical-power prices, in 2005 too chalked up a record rise (up 43% - referring to the average price in dollars per barrel for Brent crude). This market dynamics has as its natural effect significant increases in the prices of the principal energy sources used in the production process: electrical power and, for thermal energy, petroleum coke, whose prices according to ISTAT increased in 2005 by 12.3% and 19% respectively.

This stress in energy-products markets, with prices further increasing during 2006, is fated to increase the already significant incidence of energy on total production costs. Cement manufacturers cannot cope with this situation by increasing energy efficiency. Over the past few years enormous investments have been made in process technological innovation aimed at this purpose. Owing to this strategy of sustainable development the cement sector as a whole has already reached peak energy efficiency levels, that is, levels practically in line with the highest standards permitted by current technology.

Italy's cement industry can today boast energy efficiencies among the best in Europe, with unit heat consumptions of around 3300 MJoules per kilogram of clinker, as against a UE average about ten percent lower (source: CEMBUREAU).

The thermal energy necessary to bake raw materials was met in 2005 as well prevalently through solid fuels, in particular imported petroleum coke, 2.86 million tons (+0.3%) of it being consumed. The consumption of other conventional sources of thermal energy, even if used marginally, dropped by 20.5% (natural gas) and 4.7% (fuel oil).

This energy consumption behaviour of course increased the incidence of solid fuels – it grazes 89% today – and lessened the coverage of energy needs by other conventional fuels.

On the whole thermal energy consumption diminished slightly, despite production of semi-finished clinker being substantially stable, while electrical power consumption, 5.12 GW-h, grew by 2.9%. As the table shows, the contribution of non-conventional fuels, after the slight increases of the past years, dropped below five percent, among the lowest values in Europe.



The use of these fuels in cement kilns is much more widespread in the rest of Europe, it being in some cases granted government incentives. Considering the obvious advantages of an environmental nature and the economic savings tied to lower costs of wastes disposal that their energy recovery can bring about, it is our hope that in the near future greater attention will be paid to this topic by central and local institutions, and that the rules picture in this regard will be simplified.

#### CONSUMI ENERGETICI NEL 2005 ENERGY CONSUMPTIONS IN 2005

		Variazioni % / Change % 2005 / 2004	
Energia elettrica / <i>Electrical power</i>	kWh	5.127.031.199	2,9
Metano / <i>Natural Gas</i>	mc / m <sup>3</sup>	43.890.958	-20,5
Carbone / <i>Coal</i>	t / tonnes	2.861.111	0,3
Olio combustibile denso <i>Heavy fuel oil</i>	t / tonnes	128.315	-4,7
Combustibili non convenzionali <i>Non-conventional fuels</i>	t / tonnes	176.365	-19,8

#### ANDAMENTO DEI CONSUMI DI COMBUSTIBILI DAL 1996 AL 2005 FUEL CONSUMPTIONS FROM 1996 THROUGH 2005

	%			
	Carbone / <i>Coal</i>	O.c.d. / <i>HFO</i>	Metano / <i>Natural gas</i>	Altri / <i>Other</i>
1996	86,8	7,3	3,3	2,6
1997	84,9	9,7	3,3	2,1
1998	84,8	10,4	4,0	0,8
1999	84,2	10,5	3,5	1,8
2000	90,9	5,1	1,8	2,2
2001	91,4	4,9	1,6	2,1
2002	91,1	4,6	1,3	3,0
2003	87,3	5,2	2,2	5,3
2004	87,7	4,9	1,7	5,7
2005	88,9	4,8	1,4	4,9

## CEMENT TRANSPORT

During 2005 cement transport modes underwent no significant variations. After the dip in 2004, the incidence of bulk cement deliveries recovered somewhat (78.1%), while sacked cement deliveries dropped by 21.9% from the previous year's 22.1%. Both values were substantially in line with the UE average.

In particular, in 2005 bulk-cement deliveries of 36 million 257 thousand tons were recorded, and 10 million 143 thousand tons of sacked-cement deliveries. On collating these figures with cement intermediate destinations, it appears that the increase in the resale share, which generally receives sacked product, was more than compensated by the increase in the exports share, mostly bulk flows. From the regulations standpoint 2005 was a year of fundamental importance for the regulation of truck transport in Italy. In February 2006 the delegated-law bill providing for the re-organization of the laws governing the sector concluded its parliamentary procedure. By it, the laws regulating motorized transport of persons and things were liberalized.

The delegated law, for which the decrees enforcing it also passed, introduced the following guiding principles:

- liberalization of motorized transport according to the criterion of safeguarding competition among motorized transport firms;
- the affirmation of the principle of the liability of the carrier and of the operators in the whole transport string;
- the possibility of making private-law agreements between carrier and user associations.

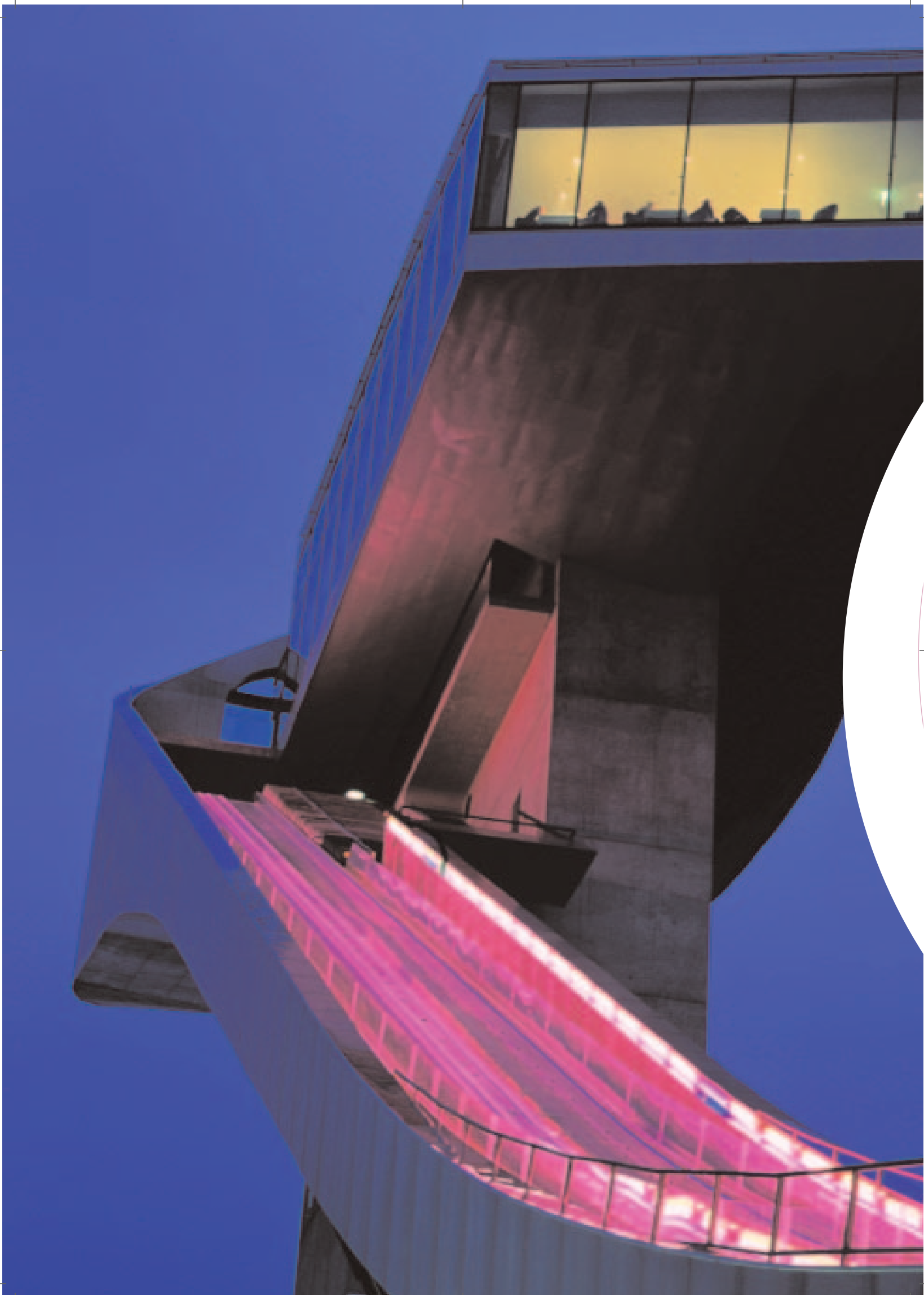
According to an AITEC-commissioned survey on the movements of product by ship 800 thousand tons of cement (a figure that does not include flows from abroad) were moved by sea in 2005, the prevalent (but not exclusive) directrix being south-to-north. That figure represents two percent of cement shipped and is anyway lower than the average for the UE, for which six percent of cement is hauled by ship.

### RIPARTIZIONE CONSEGNE NEL 2005 DELIVERY DISTRIBUTION IN 2005

	t / tonnes	%
Insaccato / Sacked	10.143.439	21,9
Sfuso / Bulk	36.267.947	78,1

### ANDAMENTO RIPARTIZIONE CONSEGNE DELIVERY DISTRIBUTION

											%
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
Insaccato / Sacked	29,4	27,6	25,6	26,2	23,2	22,2	21,7	21,0	22,1	21,9	
Sfuso / Bulk	70,6	72,4	74,4	73,8	76,8	77,8	78,3	79,0	77,9	78,1	



## ENVIRONMENTAL REGULATIONS

As for last year, during 2005 as well much of the attention of the association's technical offices was concentrated on developments in the long and fragmentary procedure for arriving at the regulations enforcing the Kyoto protocol. Emphasis was placed on one of its principal instruments in particular: emissions trading.

### *The enforcement of the Kyoto protocol and of directive 2003/87/EC*

Despite the fact that directive 2003/87/EC calls for completing the procedure for assigning CO2 quotas by the end of October 2004, at the time of publication of this Report (June 2006) this procedure had not as yet terminated in Italy. Still to be done in fact is the issuance of the quotas to the plants called "new entries". The National Emissions Register is not as yet completely functioning either. This register's task is in fact to keep track of the emissions quotas assigned to the individual plants and to make possible the transactions intended. The regulations picture, for that matter, still lacks the document bearing witness to the directive's incorporation into the nation's legal system.

The Authority watching over it is making up for this lack with a long series of director's enforcement decrees. Through them the attempt is being made to comply — in partial and fragmented manner — with the obligations imposed by the directive: issuance of the authorizations to emit CO2, emissions bookkeeping, acknowledgement of the bodies certifying the emissions, communication of the data, and so on.

On the operations level, 2005 was witness to an intense negotiating activity between the competent authorities and the industrial sectors involved. This had led to an Assignment Plan at first agreed upon by everyone, but then approved by the European Commission with a curtailing of no less than 23 million tons of CO2 per year, thus setting an emissions ceiling that is substantially inadequate to cover the needs of all sectors involved. Specifically to request cancellation of that decision by Brussels AITEC filed suit before the European Community's court of first resort.

After the final publication of the scheme of the decision for the assignment of the CO2 quotas for the three-year period 2005-2007, which took place at the start of this year and was then found to be discriminatory and penalizing for the cement sector, AITEC filed suit as well before the TAR (regional administrative tribunal) of Latium. Both suits are underway.

In any event in 2005 the obligation on operators of communicating and monitoring CO2 emissions went into force.  
On a purely voluntary basis and in anticipation of what would



then be prescribed by law, the AITEC companies had already for some time assigned to an outside party the verification and certification of their emissions.

This allowed them to be prepared to comply with the terms of law, but also to carry out everything set forth in the association's document interpreting the European decision on emissions monitoring, confirming its reliability and the correctness of the line proposed and drawing from this obvious benefits.

Within this context a convention was signed with the Experimental Station for Fuels (SSC), the aim to carry on a campaign of measurements of the parameters regarding the principal conventional and alternative fuels. The averages were then used by the associated companies in their yearly reports.

At the time of publication of this Report negotiations are underway now for the assignment of the emissions quotas for the period 2008-2012 (PNA-2). The risk is that overall emissions levels will be negotiated that are further reduced below those current, for one thing because Italy is a long way from complying with its engagement to reduce them, as taken with the Kyoto Protocol. But another reason is that the new European Commission provisions have modified the definition of the field of application of the Emissions Trading Directive, so that the overall ceiling assigned to the country will be distributed over a larger number of operators.

Since the only technically feasible way toward a significant improvement in the Italian cement industry's energy efficiency goes through the use of non-conventional fuels in the kilns, it is to be hoped that in this negotiating phase mechanisms will be introduced that at least guarantee the neutrality of the emissions from these fuels, on the basis of what has already been done by other European countries.



### ***Cement's chromium VI content***

As those concerned know, directive 2003/53/EC, incorporated into the Italian legal system by Health Ministry decree of May 10<sup>th</sup> 2004, forbade, starting as of January 17<sup>th</sup> 2005, the marketing of cement and of preparations containing cement, that contain more than two ppm of water-soluble chromium VI. AITEC's associated companies were not found unprepared to meet this deadline.

Since the provisions mentioned do not define a reference test method for determining the amount of chromium VI, the European Commission made up at the start of 2005 a communication that formalized the adoption of the test method pr-EN 196-10:2004 worked up by CEN. This communication, which followed the indications several times expressed by CEMBUREAU in this regard, establishes that "...while awaiting the final version of EN196-10, this document is to be considered as furnishing the pertinent methods for determining the water-soluble chromium VI content in cement".

In Italy this indication was incorporated by the Health Ministry decree of February 17<sup>th</sup> 2005. On the basis of the scheme of the decree for the evaluation of cement's compliance with the prescriptions on chromium VI content, AITEC and ITC-CNR made up a voluntary system of verification by an outside party (ITC-CNR itself taking on this task) to gain the certificate of compliance with the harmonized EN standards and with the European Technical Approvals for various construction products or families thereof. The system was completed and implemented during 2005, in such fashion that, starting from the first months of 2006, all cements and hydraulic binders manufactured by the AITEC associated companies – in any event in compliance with the prescriptions on chromium VI already since the entry into force of the law – be subjected to a rigorous evaluation of compliance, carried out by an authoritative outside-party body.

It is to be noted furthermore that the member companies have decided to exert every effort possible to limit the chromium VI content in their entire production. This, even though the code in fact leaves up to the manufacturer the choice of intervening on the whole of the cement produced or only on that marketed in sacks and therefore subject to "manual" use by workers.

### ***Authorization for co-incineration of wastes in cement works as an anticipation of the Integrated Environmental Authorization (AIA)***

Among the most expectantly awaited new legislation, as regards the definitive regulation of energy recovery from wastes and the aspects of integrated environmental management, are legislative decree no. 59 of February 18<sup>th</sup> 2005 and legislative decree no. 133 of May 11<sup>th</sup> 2005, regarding the enforcement of directive 96/61/EC IPPC and directive 2000/76/EC on wastes incineration.

The first measure, whose field of application covers both new and existing plants, for which the upgrading is set for October 30<sup>th</sup> 2007, will permit bringing the exercise of industrial activities under a sin-



gle authorization. This so-called AIA regulates the various environmental sectors and should lead, *de facto* – at least in expectations – to an effective simplification of authorization procedures.

The second measure will permit cement works to become aligned with European prescriptions on energy recovery from wastes, they being partially substituted for non-renewable conventional fuels. The exploitation of wastes in co-incineration would be a fundamental contribution to environmental sustainability but to date, in Italy especially, the percentages of substitution of conventional fuels are still marginal (5% substitution as against a European average of 20%). The reasons behind this are to be sought, first, in an objective difficulty in legislation, which does not facilitate the issuance of the necessary permits and, second, in a widespread lack of information on the part of public opinion.

The expectations that the cement industry places in the measure, which in fact introduces yet more stringent regulations, anticipating compliance with limit values on pollutant emissions by one year ahead of what was called for by the adaptation of plants for the issuance of the AIA, is just that of finally seeing dispelled the perplexities as to the real capacity of these plants to assure high environmental standards when using alternative renewable fuels such as, effectively, are wastes.

A further contribution in this direction is expected from the new legislation promoted by delegated law 308/2004 regarding the exclusion of the CDR(??) of quality from the wastes regime, on which a special interministerial board is working. It is entrusted, with the support of the competence of the Italian Thermotechnical Board, to define the limits on the use as fuel of this "new product" in co-combustion plants.

AITEC has not failed to point out to the competent authorities its concern that the definition of the provision be completed, also because it can constitute a stimulus for the sector of energy-recoverable wastes, for the definitive exploitation of "assets" of enormous potential for many industries. To ignore this aspect would in fact mean too penalizing a tool that can show itself strategic to the fulfilments required to achieve the Kyoto objective for the containment of CO<sub>2</sub> emissions.

### *The proposal for a European Chemicals code – REACH*

During 2005 the itinerary of REACH (a proposal for regulation that sets up a system of registration, evaluation and authorization of chemicals placed on the market) has seen a number of important hard points defined: on November 17th the European Parliament finalized the first reading, while on December 13<sup>th</sup> the Council reached political agreement on the proposal's text. Although it must be brought out that the measure still has far to go to become law, it can anyway be observed that the itinerary followed up to this point has already considerably modified the text of the regulation from the original proposal made by the European Commission. During the work of both Parliament and the Council numerous amendments were in fact intro-

duced, many of which seem to go in the hoped-for direction of a more precise delimiting of the field of application of the proposal for regulation, which has very reasonably been brought back to the area of products of the chemicals industry, owing to the exclusion of wastes, of natural substances and of products derived from these by physical and mineralogical conversions (such as, for example, cement clinker). The cement sector is thus looking forward with greater confidence to the conclusion of the itinerary of this important measure. Its hope is that the formulation given to the text by the substantial work done on it to date by European institutions, which seems to have started up a process of limiting the original regulation proposal's considerable complexity and onerous procedural fallout, be consolidated and confirmed at the time of the final definition of REACH and its entry into force.

### *European social dialogue on crystalline silica*

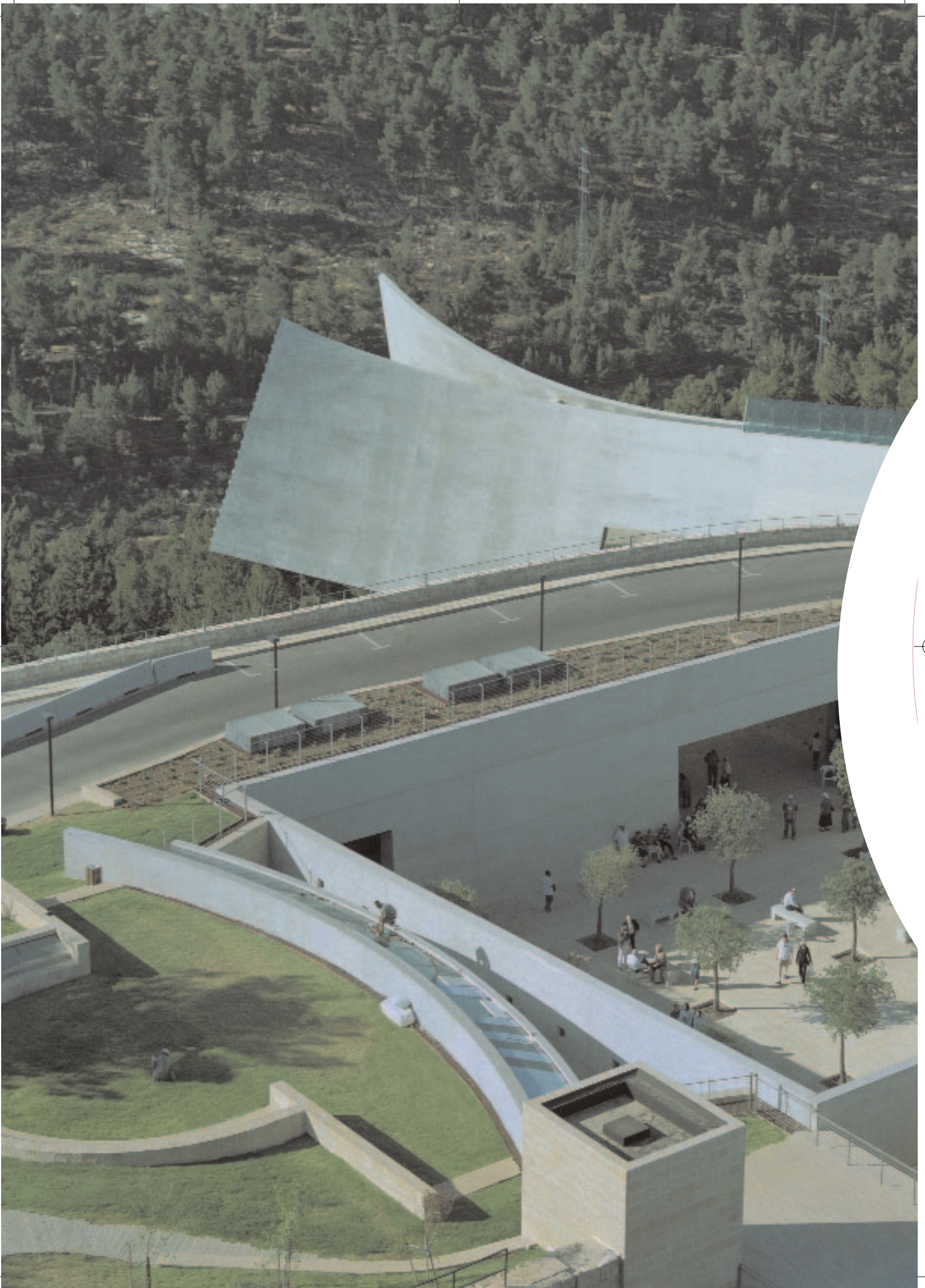
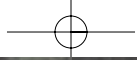
For some years now various scientific studies have been made on the correlation between exposure to free crystalline silica and the onset of illnesses such as silicosis, for which a possible correlation with the development of some forms of cancer is being evaluated.

Although the scientific discussion is still open and to date there is no evidence that confirms these correlations, the European Commission has for some time demonstrated its sensitivity to the subject. It has considered establishing at the Community level a limit on silica exposure to be inserted in directives on the protection of workers against risks caused by cancer-causing agents or by gene-mutant agents or by chemicals during work.

The Europe Commission, rather than setting exposure limits, recently decided to tackle the problem through a flexible approach aimed at promoting virtuous behaviour for the prevention and elimination of the risks tied to crystalline silica. Resort will be had to the Social Dialogue Agreement instrument, envisaged by art. 138.4 of the UE treaty. On September 1<sup>st</sup> 2005 the European representatives of the industries concerned (among which cement producers, even if marginally involved, represented by CEMBUREAU) and representatives of the European trade union confederations (invited to take part too as observers were the national institutes for health and safety) thus started up negotiation on the Social Dialogue Agreement on Breathable Crystalline Silica (NEPSI: Negotiation Platform on Silica). Its purpose was to protect the workers' health through the adoption of good practices in the use of crystalline silica and products containing it.

At the basis of the Agreement is, in fact, the *Guide to good practice on the prevention of exposure to dusts in the workplace: Respirable Crystalline Silica* prepared jointly by producers and users of materials containing crystalline silica together with representatives of the workers, the objective to guarantee a level of worker health protection equal to or greater than that which could come out of a directive.

The multisectorial agreement was made operational with the signature of all the members of NePSi; it took place in the presence of European commissioner Vladimir Spidla on April 25<sup>th</sup> 2006.



## PROMOTIONAL ACTIVITIES AND MAKING THE PRODUCT KNOWN

### **MICA: second level master's degree in Innovation in the design, rehabilitation and inspection of reinforced-concrete structures – 4<sup>th</sup> edition.**

For the school year 2005-06 too AITEC cooperated with the University of Rome, *Roma Tre* campus, in the organization of a second-level master's whose purpose is to train specific high-competence professional figures in the design and construction of reinforced-concrete structures. Taking part too in the initiative, now in its fourth version, are eight important Italian universities, with the support of, among others, the Higher Council of Public Works.

This fourth master's was opened in Rome in the presence of the chairman of the Higher Council of Public Works, Mr. Angelo Balducci, of the Chairman of the Italian Dams Register, Mr. Marcello Mauro, of the Latium, Abruzzo and Sardinia SIIT director general, Ms Valeria Olivieri, and of the director of the city of Rome's Public Works department, Ms. Lucia Conti. During the opening ceremony the third fellowship in memory of Domenico Burattini was awarded.

This version of the MICA Master's too will stand out because of its broad training offer, which envisages a program of courses (1500 hours of lessons), filled out with a series of congresses and seminars in which eminent exponents of reinforced-concrete design will speak. The last version of the Master's included conferences by Mr. J. F. Klein, Mr. Steen Rostam, and Mr. Jiri Strasky.

The students of the Master's program just concluded attended stages at the end of courses in such important institutions and organizations as the Infrastructures Ministry, the Italian Dams Register, ANAS, ITALFER, and in a number of construction companies engaged in building infrastructures for the high-speed railway line. The latest statistics on professional outlets for holders of the Master's show that 78% of them are stable parts of the working world (48% with employment contracts and 30% in the professional world), while 15% have continued their training experience as part of the research doctorate program.



## The International Concrete Design Competition, Plasticity-Opacity

The International Concrete Design Competition is aimed at students of engineering and architecture and of schools of design, and has reached its second version.

The competition, which was established as part of the European cement-industry system, is put on with the support of the national cement associations of Belgium, Germany, Ireland, Holland, the United Kingdom, Sweden and Turkey and, for the 2005-06 version, of AITEC, the competition's reference for Italy.

The project's purpose is to stimulate, through an international competition, design experimentation, supported by actual construction and laboratory work. The idea is to develop the properties of concrete by in-depth exploration of its architectural uses and the intelligent use of its characteristics.

The very successful first version (its theme was *Robustness*) had 345 students of various European countries competing. The theme chosen for this second version is *Plasticity-Opacity*, its intent to launch a challenge on the plasticity and opacity of concrete by introducing a new notion of transparency and lightness into architecture.

The initiative was officially presented by AITEC with the publication, in the association's magazine, of pages promoting the competition; press releases were also sent to aimed distribution lists of people prominent in the sector's press. Furthermore, direct presentations were made to students of the principal Italian universities.

Once the competing projects were examined, a national jury elected the three winners for Italy, to whom a cash prize will be given. They will also have the possibility of taking part, with the winners of other countries, in an international Concrete Design Master's Class lasting six days in the high-prestige Bauhaus school in Dessau, Germany.

On the site [www.concretedesigncompetition.com](http://www.concretedesigncompetition.com) all the information on rules and procedures for participation is available.



Locandina della competizione "plastic-Opacity"

### **Architectural collection: The Forms of Cement**

During 2005 a new publishing initiative was conceived and set up, aimed at architects. It is a collection of volumes on architecture in reinforced concrete, their purpose to illustrate the expressive and formal potential that cement is able to express. The reading is agile and the communication immediate, but the specific aspects of the individual works presented are well characterized. Each volume of the collection will be devoted to one of the aesthetic-formal or performance expressions of the material cement: lightness, sustainability, plasticity, transparency and, of course... concreteness.

The collection, conceived and promoted by AITEC, is being created in cooperation with a publishing house specializing in art and architecture, and its content will be edited by Carmen Andriani, Arch., a full professor of *Architectural composition and urban design* of the G. D. D'Annunzio university in Chieti. The first volume, available from September 2006, is devoted to the theme *lightness*, a concept that is analyzed through unpublished photographs, investigations, news items and data on each work presented and its architect or design engineer. In it will be presented important national and foreign creations, through which the designers wished to interpret the theme of the volume; among these we mention Richard Meier, Zaha Hadid and Toyo Ito.

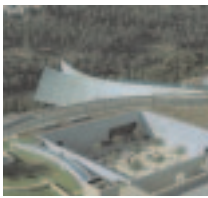
### **Relations with the media and the press**

During 2005 a number of contacts were had with the vehicles of information, whether technical or economic, to disseminate the cement sector's official positions or to communicate the various promotional initiatives started up by AITEC.

Press releases, for example, concerned first of all the sector's positions on the National Plan for assigning CO2 quotas to the nation's cement industry for the three-years period 2005-2007. These releases, filled out with attachments containing data in support of the arguments made, illustrated to the national and local press the impact that an assignment of quotas like that reserved to our sector would have on competitiveness. Furthermore, through these press releases information was given on the legal actions taken by AITEC to safeguard the interests of its associate companies, both in Europe and nationally. These positions were furthermore reconfirmed to the representatives of the media attending the AITEC press conference entitled *The impact of the Italian plan for assigning CO2 quotas to Italy's cement industry*, which was held in Milan on November 30<sup>th</sup> 2005, with the AITEC top management present, and which was given considerable space in the principal agencies and newspapers.

The other interactions with the press, with special emphasis on the mastheads and on the specialist web portals in the cement sector, had as their purpose to disseminate information on initiatives promoted by AITEC, such as the following presentations:

- the AITEC investigation into the end destinations of cement (the sixth *Cement and Construction in Italy* conference) published in summer 2005.
- the international Concrete Design Competition
- the Fourth MICA Master's project (school year 2005-2006)
- the publication of the *Ulysses Project* site: [www.progettoulisse.it](http://www.progettoulisse.it)



## The Ulysses Project (Progetto Ulisse)

With the interassociation Ulysses Project, the three reinforced-concrete-string associations (AITEC, Atecap and Assobeton) intend to promote the values of durability, sustainability and economy of reinforced concrete and its applications.

After the conclusion of phase 1, concentrated for the most part on research and on consolidating the synergy between industry and the university, during 2005 the Project's second phase got into the quick. In it more room was given to communication, through a series of promotional initiatives that took the concrete form of a rich publishing production and a carefully- aimed seminary and popularization activity.

All the results of the thirty projects brought ahead since 2001, the year the Ulysses Project started up, can be consulted on the website [www.ulyssesproject.it](http://www.ulyssesproject.it). Through this site, conceived to give maximum visibility and dissemination to the project's initiatives, the studies, simulations, publications, reports, market analyses and multimedia products created within the Project can be viewed, and information can be had on the calendar of events.

Regarding the more recent creations, to be noted are: the bulletins on the environmental statement(?) for the production of undulate plates of fibercement and on the technical characteristics and quality of cement subbases (Catalog for sizing pavements in self-locking concrete blocks in an urban environment); the volume on corrosion in concrete works; and the reports on market trends in premixed concrete and precasting. Underway now are technical tests on the efficacy of SCC (Self-Compacting Concrete) and on the mechanical effects of the use of this product on forms. During 2006 two new communication initiatives will start up, aimed at promoting highway applications, such as reinforced-concrete safety barriers and highway paving blocks.

The Ulysses Project library has been enriched with new manuals: the volume on *Fibercement*, published in cooperation with the newspaper *Il Sole 24 Ore* and that on *Masonry in blocks*, published by Pubblimento. The draft too of the manual on quality concrete has been started up. Among the new books of the Ulysses Project publishing collection, published by Pubblimento, to be noted too is a volume on *Corrosion of concrete* and the *Guide to the use of Eurocode 2*. Edited by AICAP it is an interpretative guide in two volumes aimed at designers of concrete structures; a sound technical-professional support for facilitating the acquisition of new design logics, according to an explanatory-applications approach.



Home page del sito [www.progettoulisse.it](http://www.progettoulisse.it)

### **SAIE concrete**

SAIE concrete was an event organized by the BolognaFiere fair authority in cooperation with the *Consulta per il Calcestruzzo*, a concrete consulting promotional body to which the principal parts of the reinforced-concrete string belong, among which AITEC. The objective of the event was to bring out the qualities of reinforced concrete as a material that has been "rediscovered" by vanguard architecture owing to its "technical" and "economic" values, with regard as well to sustainability.

The first version of the event took place over October 12<sup>th</sup> through 16<sup>th</sup> 2005 within the Bologna SAIE: the International Building Construction Salon, with a schedule of initiatives aimed at designers, construction companies and students. Among them we note the six conferences below, some of which directly sponsored by AITEC:

*Reinforced-concrete constructions, socio-economic development and sustainability*, a conference in which the first report on the reinforced-concrete string was presented;

*The use of reinforced concrete in contemporary architecture*;

*Reinforced concrete: technical innovation in the string*;

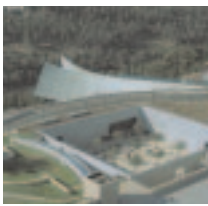
*Reinforced concrete, the material for the future: professional and managerial training*;

*Towards a durable high-quality reinforced concrete*;

*The advantages of a good installation of concrete*.

Among the various initiatives proposed as part of the event, special interest was excited by the showing devoted to the material that was the protagonist of the *SAIE 2005*. The exposition, entitled *Concrete Visions*, was conceived as a preparation of materials and solutions aimed at bringing to mind the environment and the evocation of the construction yard, with six "islands" each devoted to a winning quality of concrete: durability over time, sustainability, strength, expressiveness, and innovation. To this was added an exposition area devoted to so-called transparent concrete.

As part of the forty-first SAIE, as is the custom AITEC took part as well through its own publishing house, Pubblicement Srl, with a stand located in the "technical press" area for the promotion of the magazine *L'Industria Italiana del Cemento* and of the other publishing products in the catalogue. Didactic material on cement and its applications was distributed free of charge to professors and students.



## Project: CONCRETE

With the idea of guaranteeing a greater correspondence between concrete's technical characteristics and the environmental conditions of its application, and on the basis of what is envisaged by the new technical standards for constructions, the reinforced-concrete string in 2005 began a reflection on how to exert an effect on the quality of bills of specifications. One way considered is through direct actions of raising awareness and of promotion aimed at those prescribing. With this objective in mind *Project: Concrete* came into being, conceived by the Premixed Concrete Producers Association, AITEC too making a contribution to its creation. With *Project: Concrete* it is intended to raise concrete culture by improving the quality of specifications and thus guaranteeing greater durability to reinforced-concrete works. The project will start off in the second half of 2006 and will develop over a period of three years. Its core consists in training a crew of ten engineers to work over the nation's entire territory, their action to increase awareness of the problem and to consult with the various categories of prescribers, be they professional designers or engineers in the territorial or contract-letting administrations. The field activity will be supported by the production of studies and technical documentation, and by actions creating awareness in the specialist media.

*Project: Concrete* can boast the sponsorship of the Higher Council of Public Works.

## Teaching Information

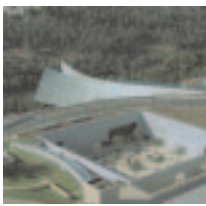
As is the rule, in 2005 as well AITEC supported the school and the university by spreading didactic information aimed both at teachers and at students. Among the channels of request for material and publications for training and teaching, in 2005 as well the website turned out to be the privileged vehicle of contact with AITEC. On the whole during 2005 numerous articles and publications were forwarded directly to the domiciles of those concerned. To them are to be added the ever more numerous consultations on electronic support that took place through the AITEC website. Furthermore, during 2005 development went ahead on the project for updating and modernizing all AITEC teaching and training material, by putting it on multimedia support.



Locandine delle conferenze Master MICA

ATTIVITÀ PROMOZIONALE E DIVULGATIVA





### Other activities of promotion and communication

Besides the activities described at length in the preceding sections, brought to a conclusion too, or started off, were other initiatives involving communication and promotion, whether institutional or regarding products, among which we note:

AITEC's participation, as supporter, in the 61<sup>st</sup> *Conference on traffic and circulation*, organized by the Milan Automobile Club. One of the most important dates at the national level on mobility and road safety, it is furthermore sponsored by the Office of the President of the Republic. The 2005 Conference, centering around the topic of mobility in urban space, was the occasion for presenting the advertising campaign *Mobility, the solution is cement*.

The presence of AITEC and of the Ulysses Project at the *Infrastructura* event *Innovation in Infrastructures and in mobility*, in Turin.

The start-up of a process of widening distribution channels for *Pubblicemento* publishing products, with a cooperation agreement signed with a portal for on-line marketing subscriptions to the magazine *L'Industria Italiana del cemento*.

Cooperation with cement and construction fairs for the promotion of the magazine, among which the *EDIL* event in Bergamo.

To be added to the above initiatives, referred to the year 2005, is AITEC's presence at the *Viatec* international congress in Bolzano, devoted to tunnel safety (February 2006), promoting the use of concrete in tunnel pavements and its advantages in safety terms.



VI Indagine Aitec sulle "Destinazioni finali del cemento", edizione 2005



Cement Works in Italy

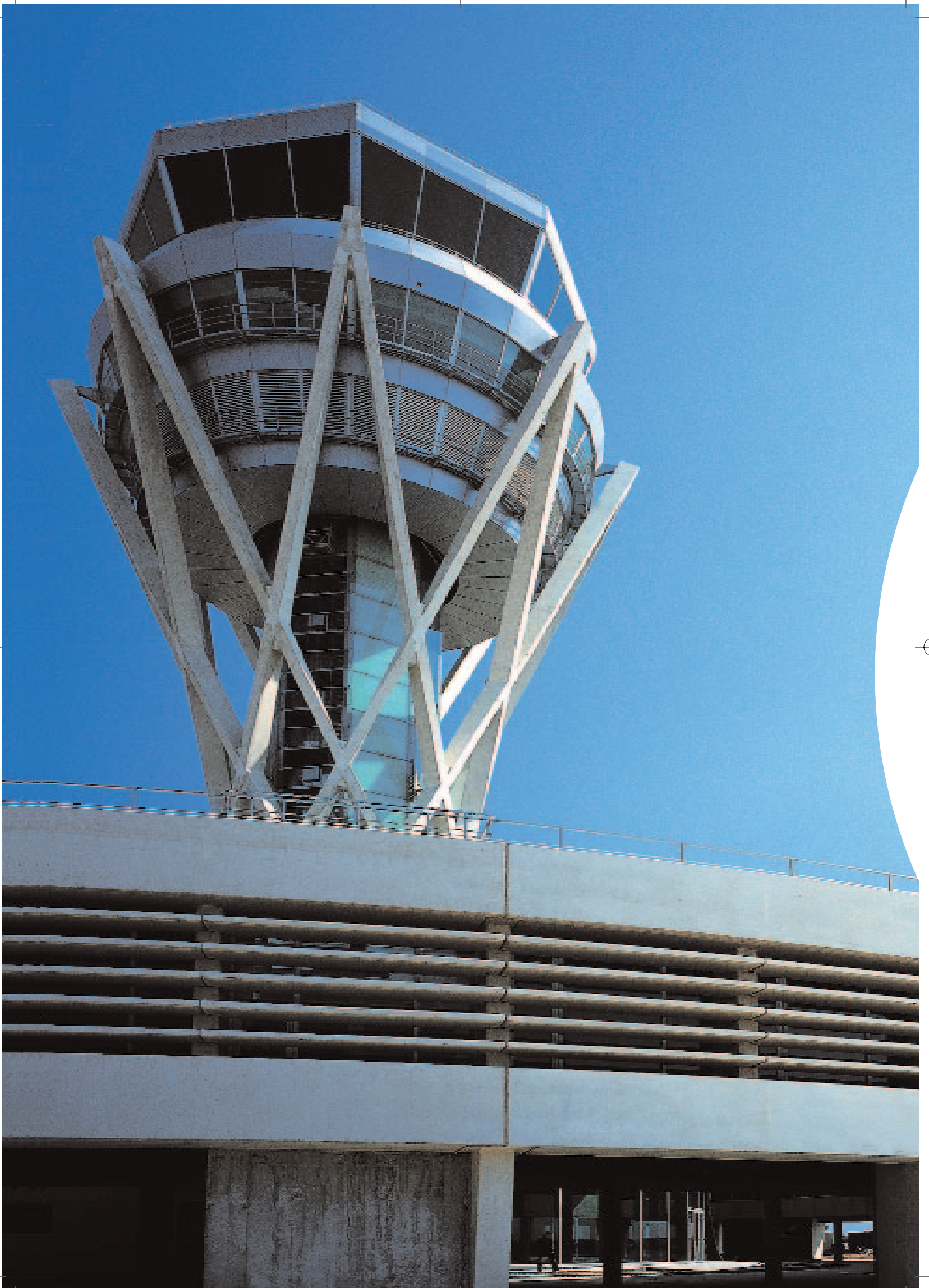


TABELLE STATISTICHE ANNESSE

- CEMENT INDUSTRY ACTIVITIES

---

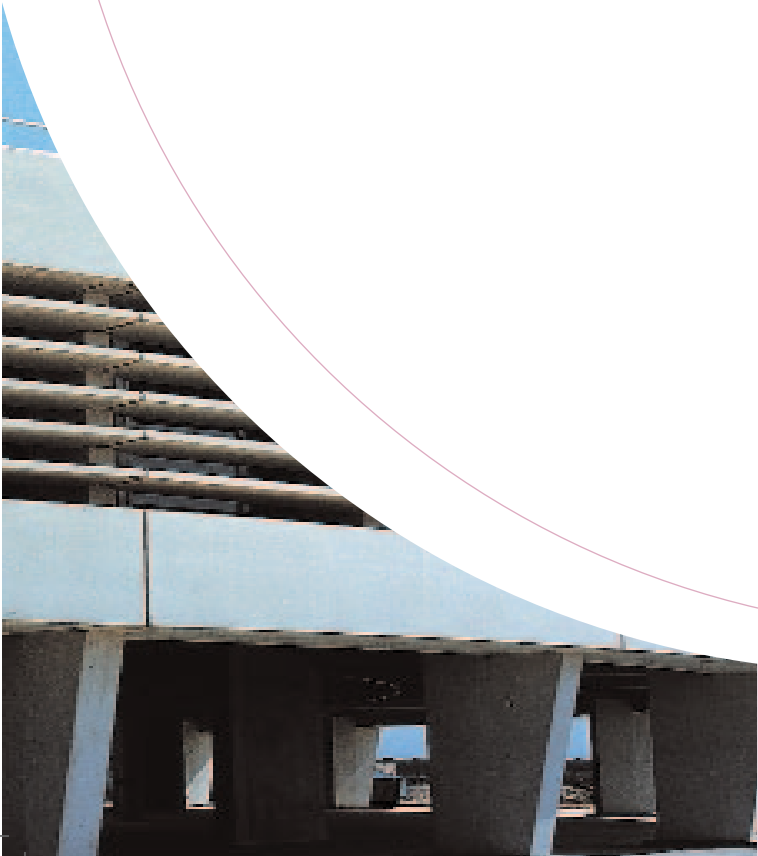
- CEMENT PRODUCTION, STOCKS AND CONSUMPTION BY GEOGRAPHIC LOCATIONS

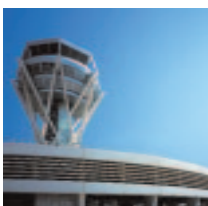
---

- MONTHLY CEMENT PRODUCTION

---

- WORLD CEMENT PRODUCTION





ATTIVITÀ DELL'INDUSTRIA CEMENTIERA  
CEMENT INDUSTRY PRODUCTION

ATTIVITÀ DELL'INDUSTRIA CEMENTIERA DAL 1981 AL 2005  
CEMENT INDUSTRY PRODUCTION FROM 1981 THROUGH 2005

	000 t / 000 tonnes				milioni di Euro correnti millions of current Euro
	Produzione Production	Consegne interne Domestic deliveries	Esportazioni* Exports(*)	Importazioni* Imports(*)	Investimenti** Investments(**)
1981	42.996	42.462	623	201	126
1982	41.524	41.077	552	173	127
1983	40.121	39.493	589	236	n.d / n.a.
1984	38.851	38.351	522	252	129
1985	37.266	36.960	384	381	139
1986	35.909	35.857	275	319	129
1987	37.008	36.728	375	765	129
1988	38.747	38.441	358	1.889	137
1989	40.374	40.040	351	2.347	155
1990	40.751	40.438	338	2.906	155
1991	40.717	40.541	273	3.042	181
1992	41.347	41.200	255	3.637	181
1993	34.705	34.623	255	3.182	155
1994	33.084	32.443	678	2.454	155
1995	34.019	32.821	1.330	1.841	129
1996	33.832	32.346	1.651	1.304	119
1997	34.378	32.384	2.136	1.533	129
1998	36.076	33.601	2.731	1.185	145
1999	37.299	34.690	2.572	1.677	181
2000	39.020	36.544	2.561	2.340	196
2001	39.804	37.250	2.577	3.220	210
2002	41.417	39.168	2.357	3.878	330
2003	43.462	41.310	2.233	4.525	380
2004	46.053	44.082	2.006	4.996	400
2005	46.411	43.884	2.433	4.996	450

(\*) Cemento e clinker / Cement and clinker.

(\*\*) Dati ISTAT fino al 1982; stimati dal 1984 / ISTAT data through 1982; estimated from 1984.



## TABELLE STATISTICHE ANNESSE

PRODUZIONE, GIACENZE E CONSUMI DI CEMENTO PER CIRCOSCRIZIONI GEOGRAFICHE  
 CEMENT PRODUCTION, STOCKS AND CONSUMPTION BY GEOGRAPHIC DISTRICT

CONSUMI APPARENTI PER ABITANTE  
 APPARENT CONSUMPTION PER INHABITANT

	Totale Total	Settentrione North	Centro Central	Meridione South	Isole Islands	Media Average
	t / tonnes	kg / kg				
1991	43.382.650	711	741	591	861	751
1992	44.520.161	735	756	586	845	770
1993	37.723.309	637	666	492	649	661
1994	34.868.291	601	631	516	541	610
1995	34.638.927	652	604	515	525	605
1996	33.622.812	656	595	483	553	586
1997	33.767.446	640	620	522	561	587
1998	34.685.376	646	681	564	598	603
1999	36.147.317	666	698	603	588	628
2000	38.337.636	711	689	626	627	664
2001	39.468.813	742	722	635	712	703
2002	41.268.850	801	716	629	664	724
2003	43.511.280	820	761	656	701	755
2004	46.357.983	838	783	730	753	792
2005	46.051.596	831	792	747	746	794

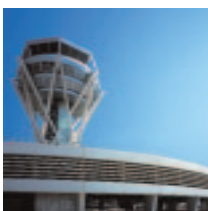
(\*) Calcolati sulla popolazione del giugno 2005 / Computed using june 2005 population data.

GIACENZE  
 STOCKS

	Cemento / Cement	Clinker
	t / tonnes	t / tonnes
1991	1.214.959	1.950.799
1992	1.194.610	2.369.664
1993	1.087.905	2.465.683
1994	1.160.109	2.193.567
1995	1.220.757	2.440.921
1996	1.183.224	2.521.632
1997	1.172.970	2.689.417
1998	1.063.428	2.081.337
1999	1.192.566	2.202.105
2000	1.201.977	2.005.533
2001	1.279.092	2.317.193
2002	1.254.109	2.040.430
2003	1.228.064	2.091.439
2004	1.199.601	2.471.218
2005	1.300.625	2.702.014

PRODUZIONE DI CEMENTO PER AREE GEOGRAFICHE  
 CEMENT PRODUCTION BY GEOGRAPHIC DISTRICT

	Settentrione North	Centro Central	Meridione South	Isole Islands	Totale / Total 000 t / 000 tonnes
	1991	18.163	8.167	8.480	5.907
1992	18.790	8.335	8.416	5.806	41.347
1993	16.187	7.291	6.901	4.326	34.705
1994	15.281	6.913	7.260	3.630	33.084
1995	16.572	6.637	7.266	3.544	34.019
1996	16.709	6.549	6.835	3.739	33.832
1997	16.347	6.833	7.400	3.798	34.378
1998	16.527	7.520	7.983	4.046	36.076
1999	17.085	7.730	8.520	3.964	37.299
2000	18.311	7.653	8.834	4.222	39.020
2001	18.973	7.648	8.640	4.543	39.804
2002	20.473	7.809	8.753	4.382	41.417
2003	21.247	8.395	9.173	4.647	43.462
2004	22.025	8.763	10.255	5.010	46.053
2005	21.972	8.940	10.524	4.975	46.411



PRODUZIONE MENSILE DI CEMENTO  
MONTHLY CEMENT PRODUCTION

PRODUZIONE MENSILE DI CEMENTO DAL 1996 AL 2005  
MONTHLY CEMENT PRODUCTION FROM 1996 THROUGH 2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	t / tonnes									
Gennaio / January	2.173.553	1.833.597	2.189.084	2.293.416	2.353.532	2.453.949	2.485.318	2.650.781	2.828.628	2.873.488
Febbraio / February	2.321.287	2.631.647	2.667.378	2.472.384	3.093.299	2.951.315	3.158.838	3.226.042	3.565.623	3.267.192
Marzo / March	2.982.127	3.326.855	3.223.724	3.303.655	3.675.380	3.595.884	3.887.004	4.153.230	4.116.383	3.964.373
Aprile / April	2.825.394	2.942.148	3.049.077	3.223.971	3.258.450	3.320.671	3.407.565	3.765.823	3.980.129	4.180.410
Maggio / May	3.257.841	3.283.344	3.428.915	3.602.843	3.804.682	3.776.109	3.992.488	4.239.299	4.436.008	4.635.124
Giugno / June	3.442.728	3.189.752	3.439.934	3.553.637	3.702.130	3.884.029	3.843.681	4.025.937	4.225.713	4.427.626
Luglio / July	3.328.972	3.391.120	3.507.581	3.795.676	3.803.920	3.851.438	3.994.457	4.204.915	4.540.839	4.629.252
Agosto / August	2.405.311	2.341.866	2.405.306	2.471.169	2.527.502	2.524.345	2.658.833	2.566.117	2.815.507	2.891.532
Settembre / September	2.982.375	3.218.092	3.317.507	3.371.174	3.496.719	3.590.840	3.613.587	3.694.826	4.188.153	4.084.987
Ottobre / October	3.022.956	3.254.471	3.256.959	3.578.940	3.447.784	3.921.608	3.917.220	4.134.038	4.471.334	4.357.963
Novembre / November	2.919.801	2.871.018	3.187.318	3.028.064	3.051.364	3.377.913	3.646.509	3.914.649	3.708.516	3.987.944
Dicembre / December	2.169.841	2.094.154	2.402.955	2.604.015	2.805.387	2.555.967	2.811.112	2.885.873	3.175.848	3.111.495
Totale / Total	33.832.186	34.378.064	36.075.738	37.298.944	39.020.149	39.804.068	41.416.612	43.461.530	46.052.681	46.411.386

PRODUZIONE DI CEMENTO PER MESI E PER CIRCOSCRIZIONI GEOGRAFICHE  
MONTHLY CEMENT PRODUCTION BY GEOGRAPHIC DISTRICT

	Italia Settentrionale Northern Italy		Italia Centrale Central Italy		Italia Meridionale Southern Italy		Italia Insulare Italian Islands		Totale Total	
	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004
	t / tonnes									
Gennaio / January	1.286.994	1.254.138	556.977	563.059	656.859	638.211	372.658	373.220	2.873.488	2.828.628
Febbraio / February	1.625.711	1.639.460	639.220	708.389	648.236	797.268	354.025	420.506	3.267.192	3.565.623
Marzo / March	1.916.766	1.953.151	768.401	775.649	845.443	900.707	433.763	486.876	3.964.373	4.116.383
Aprile / April	1.999.254	1.976.223	818.637	721.607	958.493	866.518	404.026	415.781	4.180.410	3.980.129
Maggio / May	2.197.391	2.105.177	929.406	848.340	1.022.158	992.072	486.169	490.419	4.635.124	4.436.008
Giugno / June	2.078.863	2.131.793	870.294	779.192	1.018.195	889.861	460.274	424.867	4.427.626	4.225.713
Luglio / July	2.225.009	2.265.781	927.629	856.971	1.020.345	958.720	456.269	459.367	4.629.252	4.540.839
Agosto / August	1.258.604	1.275.228	567.640	482.434	746.289	732.646	318.999	325.199	2.891.532	2.815.507
Settembre / September	1.947.836	1.980.262	759.025	811.165	935.724	961.316	442.402	435.410	4.084.987	4.188.153
Ottobre / October	2.029.954	2.118.986	817.797	861.959	1.040.051	1.009.075	470.161	481.314	4.357.963	4.471.334
Novembre / November	1.935.773	1.789.831	734.881	731.704	907.645	811.010	409.645	375.971	3.987.944	3.708.516
Dicembre / December	1.469.486	1.534.869	550.008	622.921	725.156	697.189	366.845	320.869	3.111.495	3.175.848
Totale / Total	21.971.641	22.024.899	8.939.915	8.763.390	10.524.594	10.254.593	4.975.236	5.009.799	46.411.386	46.052.681

## TABELLE STATISTICHE ANNESSE

**PRODUZIONE MONDIALE DI CEMENTO**  
**WORLD CEMENT PRODUCTION**
**PRODUZIONE MONDIALE DI CEMENTO DAL 2001 AL 2005**  
**WORLD CEMENT PRODUCTION FROM 2001 THROUGH 2005**

	2001	2002	2003	2004	2005	2005 2004	2005 2001	2001	2005
	Milioni di t / Millions of tonnes					Variazioni % / Change %		Incidenza % / Percentage %	
Asia / Asia	1082,2	1193,0	1298,7	1431,7	1.547,8	8,1	43,0	64,1	68,1
di cui Cina / China	627,2	704,7	813,2	933,6	1.021,5	9,4	62,9	37,1	45,0
di cui India / India	108,7	119,8	125,6	128,6	142,6	10,9	31,2	6,4	6,3
di cui Giappone / Japan	79,4	76,4	73,8	72,3	69,5	-3,9	-12,5	0,0	3,1
Europa / Europe *	306,7	314,3	322	340,6	379,7	11,5	23,8	18,2	16,7
di cui Italia / Italy	39,8	41,4	43,5	46,1	46,4	0,7	16,6	2,4	2,0
America / America	216,9	215,5	219,4	224,3	240	7,0	10,7	12,8	10,6
di cui U.S.A. / U.S.A.	88,9	89,7	92,1	95,0	102	7,4	14,7	5,3	4,5
Africa / Africa	75,6	79,6	80,5	87,1	93,5	7,3	23,7	4,5	4,1
Oceania / Oceania	8,1	9,1	8,6	9,9	10,6	7,1	30,9	0,5	0,5
Totale / Total	1.689,5	1.811,5	1.929,2	2.093,6	2.271,6	8,5	34,5	100,0	100,0

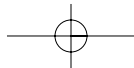
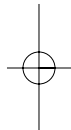
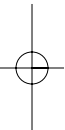
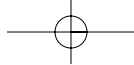
\* Inclusi Paesi ex URSS / Included ex USSR countries

Fonte: Cembureau ed elaborazioni AITEC. / Source: Cembureau and AITEC workups.

**MAGGIORI PRODUTTORI DI CEMENTO NEL MONDO DAL 2001 AL 2005**  
**MAJOR WORLD CEMENT PRODUCER FROM 2001 THROUGH 2005**

	2001	2002	2003	2004	2005	2005 2004	2005 2001
	Milioni di t / Millions of tonnes					Variazioni % / Change %	
Cina / China	627,2	704,1	813,2	933,6	1.021,5	9,4	62,9
India / India	108,7	119,8	125,6	128,6	142,6	10,9	31,2
USA / USA	88,9	89,7	92,1	95,0	102,0	7,4	14,7
Giappone / Japan	79,4	76,4	73,8	72,3	69,5	-3,9	-12,5
Spagna / Spain	40,5	42,4	44,8	46,6	50,0	7,3	23,5
Corea del Sud / South Korea	53,7	56,4	60,3	58,0	49,1	-15,3	-8,6
Russia / Russian Federation	35,1	39,7	39,6	45,4	47,3	4,2	34,8
Italia / Italy	39,8	41,4	43,5	46,1	46,4	0,7	16,6
Turchia / Turkey	33,4	37,3	38,1	41,2	45,5	10,4	36,2
Brasile / Brasile	38,9	38,0	34,0	34,4	36,7	6,7	-5,7
Messico / Mexico	30,0	31,3	34,0	32,8	36,4	11,0	21,3
Indonesia / Indonesia	34,8	31,0	34,9	34,0	35,2	3,5	1,1
Tailandia / Thailand	35,0	38,8	35,6	36,6	32,1	-12,3	-8,3
Germania / Germany	31,0	31,2	33,4	33,4	31,8	-4,8	2,6
Iran / Iran	27,5	28,4	30,4	30,5	31,0	1,6	12,7

Fonte: Cembureau ed elaborazioni AITEC. / Source: Cembureau and AITEC workups.



**On the cover:**

Bridge of Unity (detail) – Monterrey, Mexico  
*L'Industria Italiana del Cemento*

**Inside cover:**

Cover of issue 818 of the March issue of the  
*L'Industria Italiana del Cemento* magazine.

**Inside:**

Page 4

Paramount residential complex – San Francisco, USA  
*L'Industria Italiana del Cemento*

Page 9

Santa Cruz auditorium - Tenerife, Spain  
*Arcvision*

Page 10

New Opera House – Copenhagen, Denmark  
*L'Industria Italiana del Cemento*

Page 36

Ski-jump – Innsbruck, Austria  
*L'Industria Italiana del Cemento*

Page 38

Pavilion for plant nursery expositions – Potsdam, Germany  
*L'Industria Italiana del Cemento*

Pages 42 and 49

Holocaust museum – Jerusalem, Israel  
*L'Industria Italiana del Cemento*

Page 52

Airport control tower – Barcelona, Spain  
*L'Industria Italiana del Cemento*

Page 54

Offices complex – Santiago de Compostela, Spain  
*L'Industria Italiana del Cemento*

Graphics design: Pubbli•house srl - Rome

Printing: *Grafica e Stampa di G. Scalia - Rome*

