

CERAMIC TILING IN ARCHITECTURE. PROBLEMS RELATED TO CONSERVATION IN VALENCIA

Dr. Jaume Coll Conesa.

Curator of the National Museum of Ceramics.

INTRODUCTION

It seems that even in the last years of the XXth century, the recognition of ceramics in architecture as a covering of importance and architectural material of fundamental interest, in spite of its long history and use in emblematic buildings, has still to be accepted in certain forums. In today's building industry, ceramic applications in architecture have some indisputable functions, especially because of the low cost of the material and its special characteristics, but it must fight to gain recognition as a quality wall covering, above all in ornamental use of high added value.

The Valencia ceramic industry must take on the challenge of not neglecting the production of materials with this added value, especially because the markets that require this product are more difficult to capture because of emerging competitors. For this reason, as complementary strategies, we think that it is positive to promote its historic heritage, exploiting channels of promotion towards markets that may seem marginal at present, but in the future could offer a certain potential, either as a direct source of demand, or as a commercial image of a product of high quality and finish. This occurs for example through the action of high quality work in fields such as the conservation of our Historic Heritage.

HISTORIC EVENTS IN THE USE OF CERAMIC WALL TILINGS IN ARCHITECTURE

As to the origins of the use of ceramics in architecture, the first use of interior tiling - turquoise faience tiles can be seen in the pyramid of Djoser (2778-2723 BC) in Saqqarah. The following examples belong to the Mesopotamian world; the temple of the Goddess Mother Inanna of Warka (1440BC) constructed by the Kassite King

Karaindash, being the first historical application of ornamental architectural ceramics used on exteriors. This was in the form of a frieze of moulded bricks that represented Gods and Goddesses carrying water jugs. Elamites and Assyrians built their most ancient buildings using monochrome glazed exterior tiles. The narrative scenes in the temple of Adad of Tiglatpileser I (1117-1077 BC) were the first known polychrome glazed tiles.

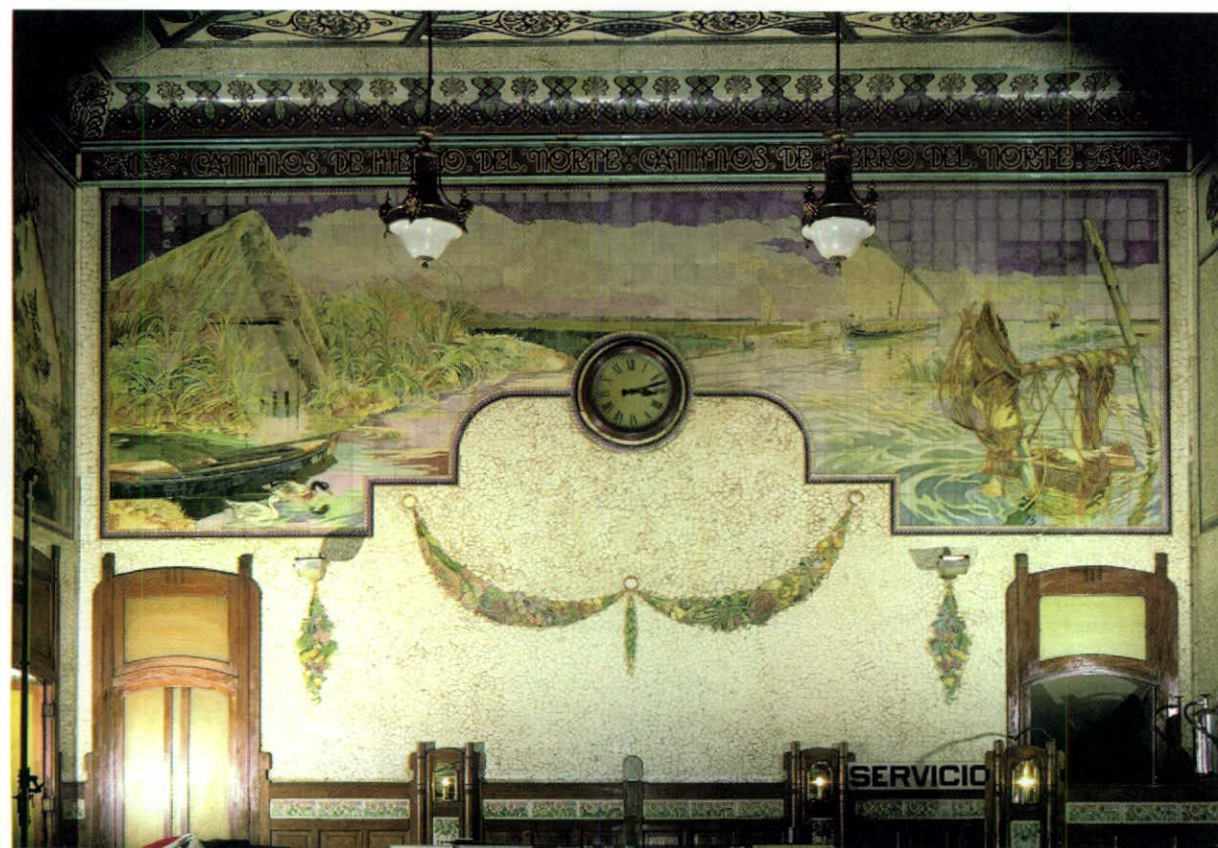
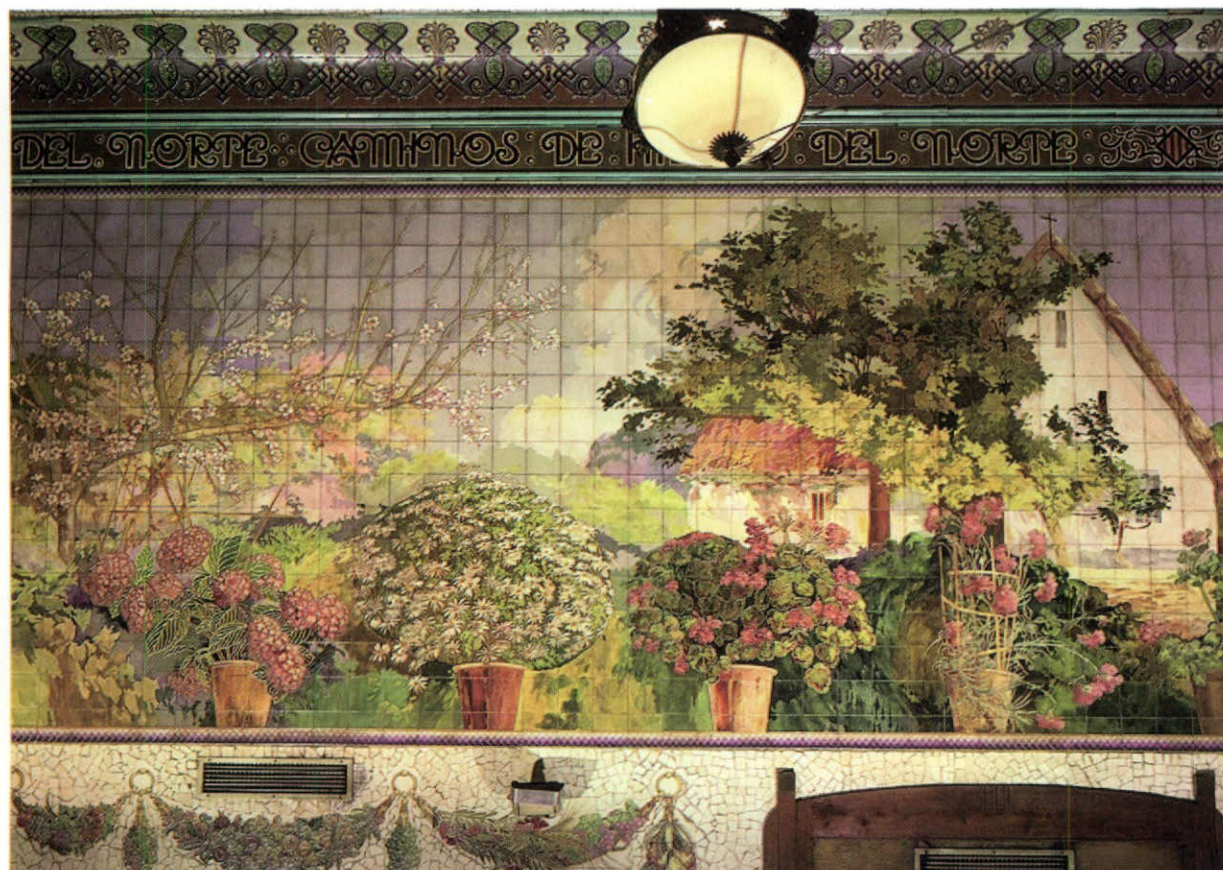
Except for the East where the tile continued to be used as an architectural covering with variable fortune, in the West ceramic tiling was used mainly as structural material, especially in Roman architecture and the tradition that followed. The use of ceramic tiling as ornamental covering is centred in the mosaic ensembles of the Late Empire and in Byzantium, coming back into use in the western architecture through the Muslim world.

Valencia welcomed the legacy of Al-Andalus using the glazed tile in the XIIIth century, at the beginning in a modest way, only in fountains and gardens and then gradually in tile flooring of the "hammam" or bathroom. Little by little the tiling was used on walls for both technical and ornamental reasons. The medieval country house of Valencia of the XVth century adopted the use of ornamental tile flooring as a systematic architectural process, several well known historical examples being "El Palacio del Real, El Palacio den Bou, El Palacio de Dos Aguas, to cite some buildings indexed in archives or by means of archaeology.

The adoption of a wall tile without horizontal ceramic covering was the result of Sevillian or Castilian influences during the last three decades of the XVIth century (Convent of Corpus Christi, Palace of the Generalitat). From that time onwards, with various interruptions in the process of acceptance and rejection of some tiles, the growth of wall and floor tiling took place in full Baroque Period (Palace of Jura Real, Colegio del Arte Mayor de la Seda, Church of San Andrés etc.), and lasted right up to the beginning of the XIXth century.

But all the historic tradition of ornamental ceramics in Valencian architecture can be summed up and consolidated with the arrival of the industrial phenomenon, which continued throughout the XIXth century. The ceramic industry, especially the tile industry, and the trends in architecture imposed a series of standards which made the idea of constructions completely devoid of ceramic decoration totally inconceivable, firstly in interiors (flooring tiles from the Fábrica de la Bellota, renovations in 1865 of Palacio de Dos Aguas, flooring tiles of Dasi for noble and bourgeois architecture, in patios and wainscotings (Casa de la Beneficencia de Valencia) and later in exterior work, Fábrica "La Ceramo" Estación del Norte, Mercado de Colón, Mercado Central etc.

Along with emblematic work, the development in town planning occurs impregnated with historicist and modernist taste encouraged by the low cost of industrial wall tiling, the colourful attractiveness that adds so much to the interior as well as the exterior and also because of its practicality. Given these circumstances extensive areas in urban expansion for the construction of secondary dwellings lead to whole areas with this new fashion (El Cabañal, Burjassot, Godella), and even country houses were restructured so as to include the new style. This tradition survived with great enthusiasm up to the thirties and then waned being totally disregarded, for obvious economic reasons, during the post-war years.



Ceramic panelling in the cafeteria of the Estación del Norte in Valencia, currently awaiting a solution for restoration and exhibition.



Outside view of the Colon Market, currently awaiting restoration.

CERAMICS, ARCHITECTURE AND CONSERVATION OF OUR HISTORIC HERITAGE FROM THE PRESENT TO THE FUTURE.

The positive appreciation of historical phenomenon of applied ceramics and especially the architectural facet is a recent fact, and it is still hardly satisfactory, given that even today it concentrates mainly on unique pieces of work. However, having said that, although the value of the ceramic component in the architecture of the Mercado de Colón and that of the Estación del Norte is appreciated, its conservation is not followed up by the stringency it deserves, that is to say with the help of specialists recognised for their work in the field of ceramic restoration. On all too frequent occasions, we watch with astonishment, as the only alternative used in the "restoration" of a piece of architectural ceramics is that of substitution. On other occasions, the original ceramic of the building is simply eliminated and substituted by an imitation (Beneficiencia de Valencia). In the worst cases the urban protection of areas with architectural origins is based on catalogues that mention some singular pieces of work, whilst whole areas lose their unity through transformation of public spaces.



Outside detail of the Colon Market, currently awaiting restoration.

Faced with these situations not only do we attack the preservation of records and the material reality of historical architecture, but we also undermine the conceptual bases of a strong powerful industry today, such as that of ceramic wall tiling in architecture. And this statement is not made from a theoretical point of view but from observations of similar occurrences in other areas of the ceramic production. The renovation and substitution of materials causes rejection for the initial material, decline in the industry and technical regression. Nevertheless the process of cultural appreciation through a deeper knowledge of history its exploitation as common wealth, the respect and appreciation for its antiques and tradition itself could be called on as support of these same technical processes and of its survival. An obvious phenomenon has occurred with pottery, where only those forms and uses which are still upheld through tradition (in the kitchen or religious or festive use) have endured with dignity.

We shall see some examples applied in the field of restoration of Historic Heritage in which the present -day ceramic industry can collaborate in the preservation of tradition in the conservation of the Historic Heritage and in generating expectations in business or in company image.

Restoration work on historic objects, whether they belong to the Historic Heritage, (that is to say, those that are expressly protected by law 13/1895 of the Historic Heritage of Spain or its rulings, or by the catalogues of the Valencia Region in our case), or those protected by local regulations (architectural distribution plans), or which are significant because they represent architecture from the past of special interest for historical or environmental reasons (working class areas or vacation areas with architecture of ceramic interest, should be carried out under clearly defined criteria, led by interdisciplinary teams where the historical and technical values should be equally

considered. It should be taken into account, that the mere fact of deciding upon an operation of rehabilitation or restoration on a building with ceramic elements implies "de facto" a positive appreciation of this building and the obligation to respect to the utmost, its historic integrity should be assumed. It is true that in the most highly protected buildings (historic monuments BIC etc) there are some legal requirements to fulfil which cannot be overlooked but it is positive that the protocol for situations of greater strictness be brought into general use, applying logic and concrete moral to ensembles or buildings with less official protection.

On the other hand there is one principle which we consider to be absolutely essential, that is the preservation of the original element, a base which should be of prime importance in any restoration process, together with the legally demanded one of the possibility of recognising the added part with respect to the original.

In spite of the fact that this essential principle seems to enter into contradiction with industrial production, there is nothing further from the truth since the industry can collaborate with its products, in the preservation of Historic Heritage in various ways.

- 1.- By supplying modern materials for restoration work on ensembles and by replacing missing volumetric and monochrome pieces.
- 2.- By using reliable techniques of imitating images that is to say the imitation of motifs and historical graphic pieces with modern quality products.
- 3.- By mass production of historic samples of tiling for use in the conservation of traditional and original architecture.
- 4.- Through research and support of complementary industries such as mortar, fillers, backing materials, adhesives, resins and polymers and special fastenings for tiled slabs.
- 5.- By collaborating in the upkeep and popularising the Historic Heritage as a base of industrial tradition.

As to the first case centred on the replacement with modern materials in plain colours, one example is that of Parc Guell in Barcelona, where the industrial stoneware was used systematically to restore the missing pieces of the "trencadís". In this case, the suitability of the material stems from the fact that not only should the aesthetic aspect of the piece be restored but also the use of its application to exteriors, finding materials which guarantees greater resistance against environmental damage. Another case where this solution was suggested was the replacement of missing pieces of white mass-produced tiles in two floorings from 1865 in the Palacio de Dos Aguas presently being restored. Faced with the problem of the erosion of numerous tiles on the floors with a floral decoration, the problem was significantly more serious on the plain tiles, the suggestion of replacing the white tiles which were in bad condition, with stoneware tiling 20 x 20 cm in a mute colour was put forward. As to the future application of this technique, used only to replace missing pieces and never in substitution, it could be applied in the restoration work in the small Palace of Nolla in Meliana, or in the restoration of mosaic floors in architecture of extension.

The second case differs from the first, in the necessary imitation of decorations of historic tile floorings, friezes or changed panels - in order to recuperate its ornamentation



Tile skirting in the schoolyard of the Colegio del Corpus Christi in Valencia, a XVIth century building with serious preservation problems.

or functional character apart from other mechanical qualities. The possibility of its use is evident in restoration work, including Gothic type floors (Castillo de Benisanó, Palacio Ducal de Gandia, Castillo de Alacuás). This process could also be considered in the renovation of historical floors that imitate examples from the past and which now have numerous mechanical and conservation problems, as is the case of the flooring in the Golden Salon of the Palau de la Generalitat, reconstruction carried out in 1936 by Gimeno de Manises, now renovated but given its conservation problems presents serious doubts as to its maintenance and future viability.

The recreation of the decorative elements can be done through a mechanised process of graphic and printed restoration carrying out a digital reconstruction of the motif, and the reproduction through screen-printing or patterned prints which could be perfectly recognisable in a later optical analysis. Naturally these operations should be strictly considered responsibly, under the technical supervision of qualified personnel with high standards who can advise on the final shape of the product, and technical advice for the correct choice of suitable material. The added value of this technique is that it allows the possibility of a visual recreation of decorative structures with up to date materials which in turn allows the functional rehabilitation without distortion or falseness.

However, the major problem encountered in the application of these techniques is the lack of suitable products so the manufacture of a product for special purposes is necessary. Anyway we trust that this should not present excessive difficulties with today's technology since it is always possible to start with the machine-produced material and adapt it to a particular requirement probably at a lower cost and certainly of better quality than having to rely on traditional methods. In any case, it is obvious that the finding of concrete solutions should arise from dialogue between the curator or restorer as a specialist with knowledge and expertise on the subject, the expert in construction who must determine the quality of the product and the specialist in industrial process who must analyse and decide upon the possibilities of the use of a certain product with minimal modifications on the production line whilst maintaining reasonable costs. The added value of this technique is that it affects the reduction of the costs of the restoration work and composition of the patrimonial work by normal procedures; in the possibility of mass production treatments applicable to large surfaces and in the reconstruction of large compositions from an aesthetic aspect but always discernible from the original, advantages which cannot be achieved by craftsmanship which could even cause confusion and falseness.

The third proposal concerns the present industrial line of mass reproduction of traditional ceramic models. Our proposal goes beyond the simple inspiration in traditional motifs and would affect the system of reproducing not only themes but also complete products starting from its true dimensions and decorative elements, marking the differences by using materials which are different from the original ones, with impressions or special stains in the decoration which would allow them to be distinguished from the antique ones. With this line of production the versatility of its present use could be achieved, as well as potentially increasing the market given the possibility of its use in reproduction or reconstruction of historical surroundings. Obvious uses here are the replacement of tiled floorings and decorative work on balconies so closely linked to Valencian tile work, or in the aesthetic restoration of original architecture. The advantages lie in its low productive cost on being able to undertake high number of projects. Fortunately, today there are places such as the Instituto de Promoción Cerámica or Public Collections such as those of the National Ceramic Museum or the Museo del Azulejo in Onda, which can offer the businessman access to the exact original model.

The fourth proposal may seem alien to the ceramic industrial field but this is not so. Only the collaboration of this industry with other side industries especially those connected with the manufacture of materials such as mortars, fillers, backing materials, adhesives, resins, polymers or special fastenings for slabs of wall tiling can guarantee that the industrial products reach full use. This aspect is not alien to the field of restoration nor that of conservation since it is the industrial products which allow the conservation of our Historic Heritage, taking full advantage of its possibilities thus allowing its survival. In this manner, aluminium mesh used as reinforcement for tile panels, resins, mortar, and fillers for installation and fastening systems for their exhibition are essential. The present restoration of about 600 m² of tiled flooring and tiled murals in the National Museum of Ceramics needs great technical support in this sense, at the same time as the possibility of new products is being investigated and experience in its use is gained.

Finally, investment in Historic Heritage can be carried out from various options, in general actions, which could be included in marketing strategies or advertising. The basic action can consist on the diffusion of the historic tradition of which the present industry is heir, through constant references to this past heritage and its use. It is also of prime



Flooring in the Sala Dorada of the Palace of the Generalitat Valencia, built in the 30s, with serious preservation problems.

importance to promote the information and naturally the necessary diffusion of actions that the firm undertakes in the recuperation of their history. Up to now, the documentation, investigation and diffusion in this area has been mainly supported by public entities amongst which the Instituto de Promoción Cerámica of the Castellón County Council deserves pride of place. But the reorganisation of the services of industrial and cultural promotion and the reduction in its budget due to the cuts in public spending makes it necessary to revise the role of business in this aspect. Industries must also evaluate in the future, in which areas to invest the resources assigned to diffusion in the most suitable manner so that its promotions reverts directly in benefiting the image of the company itself and the sector connected with the development of its activities.

In this sense, we must not forget some key institutions that could be used as important platforms for diffusion such as specialised museums. To mention a case the National Museum had 130,000 visitors, of whom 50% were foreigners during the year before its closure for restoration purposes. This figure presents a challenge in view of the re-opening of the museum planned for next year. But it should not only be a challenge for the institution but also for the people of the land where it is situated and especially because of the weight the industry holds and whose past is jealously guarded within its walls.

Perhaps these reflections could be useful in achieving first of all the preservation of a public heritage and secondly the possibility of opening new lines of products of high value for today's industry, so as to maintain and perpetuate the position and recognition that ceramics applied to architecture enjoyed in the past in Valencia

BIBLIOGRAPHY

Recent interventions in restoring ceramic applications in Spanish architecture. Basic studies and references.

- AMITRANO, R.; BARRIO, J.; ROVIRA, S. (1988): "*Estudio de laboratorio e intervención sobre un panel de azulejos del museo de Santa Cruz de Toledo*". VI Congreso de Conservación de Bienes Culturales (Tarragona, 1986), 1988, pp. 203-219.
- ARQUILLO, F.; ARQUILLO, J. (1992): "*¡¡Salvemos los "Mercadantes" de las portadas del bautismo y el nacimiento en la Catedral de Sevilla!!*". In IX Congreso de Conservación y Restauración de Bienes Culturales, Sevilla, 1992, pp. 403-421.
- COLL CONESA, J. (1996). "*Recientes intervenciones de restauración de azulejería en arquitectura en España*". In proceedings XI Congreso de Conservación y Restauración de Bienes Culturales, Castellón, 1996, pp.
- COLL, J.; PÉREZ, J.; SCHUTZ, I. (Coord.) (1995): *Rehabilitación de la azulejería en la arquitectura*. Asociación de Ceramología, Alicante, 223 p.
- CONSUEGRA, S.; GARCÍA DOMÉNECH, V; RIEGO, C. (1995). "*La recuperación de los revestimientos de azulejería de la Iglesia del Real Monasterio de San Clemente de Sevilla*". In COLL, et al. (Coord.), *Rehabilitación de la azulejería en la arquitectura*. Asociación de Ceramología, August.
- DOBLE ESPACIO; BOTEY, J. M. (1991): "*Rehabilitación de la Casa Batlló*". On/Cerámica, 1991, p.p. 86-91.
- ESTALL I POLES, Vicent (1997). *La industria cerámica en Onda. Las fábricas, 1778-1997*. Monografías del Museo del azulejo de Onda I. Ajuntament d'Onda, 1997, 102 p.
- GELPI, L. (1995): "*Reflexions entorn de la publicació «La restauració del Palau Güell de Barcelona»*", Butlletí Informatiu de Ceràmica, 58, December 1995, pp. 16-19.
- GOMIS, J. M. (1990). *Evolució històrica del taulellet*. Col·lecció Universitària. Diputació de Castelló, Castellón, 1990, 414 p.
- GONZÁLEZ, A; CARBO, P. (1994): "*Restauración del Palau Güell de Barcelona*". On/Diseño, nº 156, pp. 74-93.
- INSTITUTO DE PROMOCIÓN CERÁMICA (1987). *Manual guía técnica de los revestimientos y pavimentos cerámicos*. Diputación de Castellón, Castellón, 1987, 494 p.
- MARTIN, J. (1995). "*El caos rodea la obra de Gaudí*". El País, 16/2/1995, p. 34.
- PARK GÜELL, 1 (1994): "*Park Güell (1): l'enginy amagat*". L'Informatiu del col. d'Aparelladors i Arq. Tècnics de Barcelona, 56, pp. 15-19.
- PARK GÜELL, 2 (1994): "*Park Güell (2): La policromia retrobada*". L'Informatiu del col. d'Aparelladors i Arq. Tècnics de Barcelona, 58, pp. 15-19.
- PÉREZ GUILLÉN, Inocencio V. (1996). *Cerámica arquitectónica valenciana*. II vols. Generalitat Valenciana. Consell Valencià de Cultura, Institut de Promoció Ceràmica de Castelló, Valencia, 1996, 330 p.

- PERLA, A. (1988): *Cerámica aplicada en la arquitectura madrileña*. Comunidad de Madrid. Consejería de Política Territorial.
- PERLA, A. (1990). "La cerámica". En VVAA. Un monumento recuperado. La rehabilitación del Hospital de Jornaleros de Maudes. Consejería de Política Territorial, C.A. de Madrid, pp. 131-161.
- PERLA, A. (1993). "Una compleja intervención. La recuperación de los zócalos de azulejería del Claustro de La Cartuja de Santa María de las Cuevas de Sevilla", *Azulejo, Rev. del Mus. Nac. do Azulejo*, Lisboa, pp. 74-92.
- PERLA, A. (1995a). "Principios y criterios para la restauración de la cerámica aplicada a la arquitectura". In COLL, et. al. (Coord.), *Rehabilitación de la azulejería en la arquitectura*. Asociación de Ceramología, August, pp. 11-34.
- PERLA, A. (1995b). "Sistemas mecánicos de arranque en azulejería: la Estación del Vasco - Oviedo- y la Cartuja de Sevilla". In COLL, et. al. (Coord.), *Rehabilitación de la azulejería en la arquitectura*. Asociación de Ceramología, August, pp. 103-134.
- PERLA, A. (1996). "Restoration of the facades of the Velázquez Palace in Madrid". *Qualicer* 96, II, Castellón, pp. 493-508.
- PORTELA, D. (1996 en pres.). "La instalación del conjunto de azulejería del Bar "Pilar" (Talavera de la Reina)". *Forum Cerámico*, in press, Asociación de Ceramología.
- RALLO GRUS, C. (1995): "Los azulejos del siglo XVI en el Monasterio de San Isidoro del Campo". In COLLI, et. al. (Coord.), *Rehabilitación de la azulejería en la arquitectura*. Asociación de Ceramología, August, pp. 159-170.
- RESPALDIZA, J. (1995): "La azulejería del siglo XVI en el Monasterio de San Isidoro del Campo". In COLL, et. al. (Coord.), *Rehabilitación de la azulejería en la arquitectura*. Asociación de Ceramología, August, pp. 53-72.
- SOBERATS LIEGEY, F. (1993): "Una empresa difícil: La restauración de la fachada". In *Pasado y Presente del Gran Hotel*. Fundació La Caixa, Palma de Mallorca.
- SOBERATS LIEGEY, F. (1995): "Criterios de intervención en el Gran Hotel de Palma de Mallorca". In COLLI, et. al. (Coord.), *Rehabilitación de la azulejería en la arquitectura*. Asociación de Ceramología, August, pp. 53-72.
- SOLSONA, C; BONO, E. (1991): "Restauración de la cúpula del Palau de la Generalitat de Catalunya". *On/Cerámica*, 1991, p.p. 96-97.