Problems concerning the colour in facades and coverings rehabilitation

Lucilla MANNA
Ph.D., University of Naples Federico II, Naples, 80100, Italy
E-mail: lucillamanna@inwind.it

ABSTRACT
The contribution evaluates the demands connected to the protection of chromatic matters in the interventions of building rehabilitation and compares them with the sphere of obligatory product certification considering any possible influence or unconcern between the two topics. At present any chromatic requirement could potentially be discharged by the modern building products that, specifically manufactured for the new constructions, are also employed indifferently in rehabilitation. From this starting statement, the script argues about the opportunity of a more correct and appropriate use of the product in rehabilitation actions with reference to the technical information of the product such as a practical tool to improve so that this could happen. In particular, it makes reference to the author’s completed Ph.D thesis entitled: “Construction Products Directive 89/106/CE and technical information in rehabilitation”.

Keywords: Building Products, Colour, Coverings, Facades, Rehabilitation

1. INTRODUCTION
Respect for the chromatism of the existing buildings has a basic importance in rehabilitation operations; in particular, it gains special stress in relation to the rehabilitation of coverings and facades because these parts offer an immediate sight to the user, helping to define the recognizability and the identity of a place.
Two scheme of things are substantial with regard to the respect of the existing buildings chromatism: one administrative and bureaucratic, and one technical and legislative. The first is connected with the existence of tools such Regulatory Plans or Colour Plans that should embrace exact indications, restrictions and prohibitions for the guidance of designers toward decisions and actions; the second, of which will be discussed in this writing, is linked to the needs to provide, for the rehabilitation, “ad hoc” products in terms of performances and colour.
Nowadays the last building merchandise, qualified to suit any chromatic requirement, offers products for new buildings also used in existing interventions construction; there isn’t, therefore, a specific manufacture designed exclusively for rehabilitation field. From this initial assumption, this contribution aims to deal with how the building products (in fact one of the tools with which they accomplish the work of rehabilitation materially) can help to “take care” of the existing building estate, deviating to considerations linked to issues related to the theme of colour, heart of the conference and broader studied topic.
Particularly, the script refers to the building product distinguished by the CE marking, then subject to compulsory
product certification; of the latter, assesses the possible influence or detachment about the chromatic issues making reference to the author’s completed Ph.D thesis entitled: “Construction Products Directive 89/106/CE and technical information in rehabilitation” [1].

2. CHROMATISM OF FACES AND COVERINGS: EXPRESSION AND MEANING

The colour, since the ancient world, has always played a major role in the architectural production of which it symbolizes builder’s local art and cultural traditions. It holds a crucial position in the process of establishing the identity of a place which, in turn, is connected with the “genius loci, namely the total qualitative phenomenon, which is an integral part of existence and not an abstract location, a set of concrete things with their material substance, shape, texture and colour” [2]; also helps to ensure that an architecture could be similar to the others (to be recognized) but, at the same time, different (to be identified) cooperating together the concepts of form and disposition, to outline the figurability that is the quality that has a place “to recall in every single viewer a pregnant mental image” [3].

The colour of the facades and coverings of building organism is configure, for its offer to the observer’s view, as vehicle for determining the historical memory of the spaces and the identifiability of places and, therefore, as element of cultural belonging both as a applied colour, either as color of used materials, as well as transparent and reflected color.

Regarding the facades, there are many places with “painted facades” thanks to which they are

---

Fig. 1
“Painted houses”.
The island of Procida.

Fig. 2
Gaily-coloured facades.
Italian example: Burano.

Fig. 3
Gaily-coloured facades; european and overseas examples.
From left: Wroclaw, Rabat.
known and remembered as such the island of Procida (Fig. 1) where the polychromy of vernacular small houses is the typical trait of a close relationship established between man, architecture and nature. Other examples are quotable at national level (Burano, Genova, Modena) as well as European and overseas (Copenhagen, Cape Town, Jaipur, Poznan, Rabat, Reykjavik) and in all cases the colours, and type of lights that they themselves generate, are architectural constituents like any other material that defines the volumes, solids and vacuums, shims and surfaces, contacts and separations and they may even attribute additional perceptions to spaces and dimensions (Figs. 2 and 3).

Just like facades, coverings color is an element of urban identity (Fig. 4), especially for sloping sites, then with several high points of sight, where the *roofscape* takes a strong recognizable character or shows *landmarks* that, thanks to the color applied with the use of local materials and techniques, contribute to characterize even small actually built. An Italian example to cite is the Amalfi coast where small colorful majolica domes towering on the landscape rendering identifiable and distinguishable the little localities successively (Fig. 5).

Unique and unrepeatable elements are discernible in the Barcellona’s landscape too where the architecture of Gauì shows a strong polychromy of both facades and coverings (Fig. 6).

Finally, there are places that, in contrast, have a chromatic uniformity between facades and coverings, like the raw earth construction in San’a. (Fig. 7). The above considerations lead, then, to emphasize the importance of colour as a means of preservation and safeguard of cultural identity and diversity and, consequently, the need for its protection in the building rehabilitation works.

3. PRODUCTS AND CE MARKING: REFERENCES TO BUILDING REHABILITATION

In order to clarify peculiarity and acceptation in the use of certain terms in this writing, it’s appropriate to furnish, preliminarily, some definitions and explanations.

First of all, as explicated above, it referred to products distinguished by the CE marking, under the Construction Products Directive 89/106/CE (CPD), as before long all building products will be subject to its dictates. This directive, in its article 1 - point 2, provides the definition of *product* taken here said that: “For the purposes of this Directive, construction product means any product which is produced for incorporation in a permanent manner in construction works, including both buildings and civil engineering works. Construction products are hereinafter referred to as products; construction works, including both buildings and civil engineering works are hereinafter referred to as works” [5]. The text of the directive, although referring only to the product construction, after a more careful reading relates to the whole building work making possible, therefore, a reference to a more general discussion of the practicable operation on the existing building, thus at operations of maintenance and re-qualification. Given the definition of the product, ratified and codified, it will examine the possible existence of an “information flow” between questions regarding the obligatory certification and the “colour matter”. Known the ability of the color to change the mode of spaces and architecture perception on the same level of building materials, is delineable the possibility to consider it in the same way of the *product* and extend to it the meaning of the directive. To do this, by narrowing the scope of the question, it was decided to shift the focus on decision-making sphere related to the choice of the product by taking into account an instrument which, owing to its substance, might address and facilitate the designer: the product technical data.
4. TECHNICAL INFORMATION OF THE PRODUCT TO USE IN REHABILITATION

Given the lack of the productive chains exclusively devoted to the building rehabilitation, stands out with greater determination the need for a designer to have a targeted and exhaustive product information apparatus, as to be able to guide and support the choice. Such occurrence is not always fulfilled due to reasons easy to notice.

First of all, the product technical data, which should allow “knowledge” of the product itself, results extremely backward since it is based on technical norms UNI dated from the second half of 80 years [6] and not updated because of the diffusion and multifaceted consequences of CE marking.

Neither are updated from the complexity reached today by the buildings products which, often structured as genuine products-system, respond to multiple requirements simultaneously; specifically, products for coverings can carry out, for example, at the same time the performance of waterproofing, insulation, ventilation and other. There is therefore a mismatch between the complexity and evolution of the product and the organization and content of technical information [7] relative to it.

The problem above argument is charging more complex thinking that intervention on the built, involving the respect of an articulated set of constraints, is characterized by specificity and singularity; precisely the “painted facades” are illustrative of the need to choose and act according to specific requirements related to the “case by case” that, as often happens in rehabilitation field, oblige at differentiate and expensive solutions.

The singular nature of the operations on existing building, often linked to peculiar construction conceptions and traditions, highlights the need for detailed technical information of the product so that the designer choices may fall on the most “suitable for use” accepting, consequently, a basic concept in the philosophy of content directive for which there is not a “good product” defined a priori.
5. FINAL CONSIDERATIONS

Considered the framing of the above considerations, this contribution proposes conclusions in the form of “open problems” footprint on two points of view: one technical-procedural, another on regulatory.

The extensive and thorough set of information that accompanies the CE product does not include questions in relation to the chromatism, as the process of mandatory certification excludes aspects related to the colour, as well as those concerned with the appearance of the product. It’s desirable, therefore, a review and integration of Construction Product Directive 89/106/CE text in favor of different types of needs from those already covered, or, in general terms, for those related to building rehabilitation since the interventions on existing built are, on clear, the majority compared to the new constructions.

It might be thought to aim productive streams which, founded on geographic ambit of destination, might produce according to specific colour ranges to satisfy precise chromatic requirements related to facades and coverings. Today, however, there are no signs that makes feel like an availability of the productive front to do so, because differentiated production processes would be complex and costly.

Referring to the above, a further proposal is better delineated.

It can be hoped the imposition of coercitive norms relating to content and on the information deepening covered in technical product data, now marked by a discretion character, that can standardize the informative model in order to make comparable the informations; these should also contain entries related to specific needs of the rehabilitation. Some of them, as those related to compatibility and durability, are certainly included in those accompanying the CE marking technical information but are often not disclosed.

A first step in this direction, then, is implementing technical norms UNI with new items about intervention works on existing buildings.
REFERENCES

6. Construction Directive Product (CPD) text., article 1, point 2.