WHEN THE INTELLECTUAL UNIVERSE OF A WORK OF ART PREVAILS OVER THE AUTHENTICITY OF ITS PHYSICAL STRUCTURE

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Taller de análisis y actuación en pintura de caballete y retablo

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ABSTRACT: *The geometric paintings of Spanish artist, José María Yturralde, are characterised by an aseptic plastic language. His works of art place special importance on the surface of the work. Prism 4 (Prisma 4), of 1972, belongs to the Impossible Figures series and corresponds to an experimental neoconstructive study which began in the late 1960's. The pictorial surface of this work was seriously damaged due to the technique used by the artist until 1973. This study presents previous studies performed on the work, the artist's opinion taken from a personal interview, and the intervention process performed which is particularly significant given the discrepancies established between the state of conservation of the surface and the concept or idea of the work.*

KEYWORDS: contemporary art, Yturralde, restoration, conservation, neoconstructivism, monochrome

1. INTRODUCTION

The conservation and restoration of contemporary artistic objects demonstrates the complex system that surrounds and determines such interventions. On occasion, the degradation of objects can lead to irreversible material or intellectual loss. However, the approach to the artistic postulates of the work and to the artist's intention can lead to its recovery and conservation.

Restoration work is evaluated by means of a critical action that examines the factors related to the work of art. Thus, once the external factors involved in the restoration have been considered, the restoration work acts on the material from which the work was made. Nevertheless, all restoration work requires an accurate approach in order to restore the meanings that the work contains. This means that the work to be done depends on the state of conservation, the artist's intention and the meanings that the work presents, among other factors.

The intervention was carried out on a deteriorated work of art by artist José María Yturralde, which was part of this previous study, which demonstrates the possibilities of decision making in interventions for the conservation and restoration of contemporary works of art. In this particular case, we will observe how some of the discrepant factors involved in the decision making were taken into account, especially the artistic intention, the artist's opinion and, why not also mention, the pressure from the art market.

The artist and the concept of the work Spanish artist, José María Yturralde, works two-dimensional forms with a marked three-dimensional accent in which the study of the pictorial space is a constant feature. At the same time, the spatiality emanating from his works is perceived through the planarity of the colours, these being the colours of the monochrome and uniform pictorial surface.

Scientific connotations with a high degree of complexity in the use of diverse significant elements, such as colour and shape, stand out in all of Yturralde's artistic productions. In this sense, it is the artist himself who explicitly summarises his artistic concerns and motivations: *"The methodological assumptions I operate with start with the aim of assimilating and rationally using scientific knowledge from different disciplines and of bringing them to the context of plastic creation at all levels. In this way, the idiomatic artistic repertoire with basic notions of the conceptual achievements of our time is extended."*

2. DESCRIPTION OF THE WORK: GENERAL ASPECTS AND STATE OF CONSERVATION

Prism 4, Yturralde's work from 1972 belongs to the Chirivella Soriano Foundation. This study was carried out thanks to the collaboration between this foundation and the Institute for the Restoration of Cultural Heritage of the Polytechnic University of Valencia. The object represented by Yturralde is a macle , a work of great importance in Yturralde's career as it meant the starting point for what would later become known as the Impossible Figures series. Prism 4 is a piece that explores geometric abstraction with the help of flat colours. Yturralde develops an optical interplay in which two inverted figures, shape and colour, are introduced.

The piece presented an advanced level of degradation, mainly as a result of the artist's technique. In addition, it also presented damage caued by its manipulation and other incidents, which is why, in the artist's opinion, its state of deterioration prevents its exhibition and comprehension.

After analysing *Prism* 4, we found a materially and intellectually deteriorated work. From a physical viewpoint, the work had been damaged which no longer makes its exhibition advisable. In addition, part of the deterioration was progressively worsening, specifically the damage caused by the construction methodology used by the artist which involved the use of nails. The nails inserted to join the different panels had not been coated or protected, and had produced rust which, in turn, has caused a profound alteration in the preparation and pictorial layers, causing serious cracking and lifting of the paintwork.

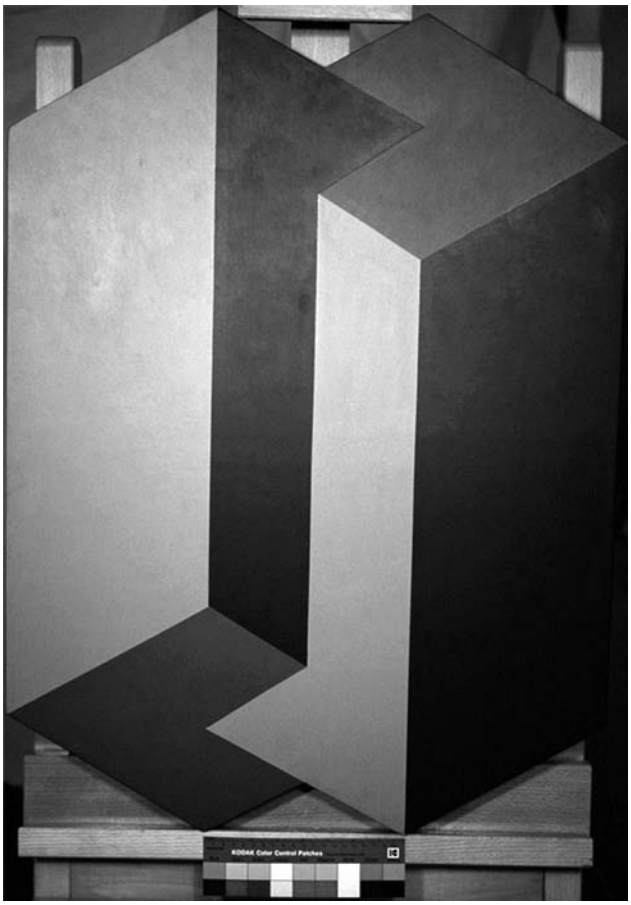


Figure1. Yturralde, José María, *Prism 4*, 1972, alkyd paint on wood derivative, front.

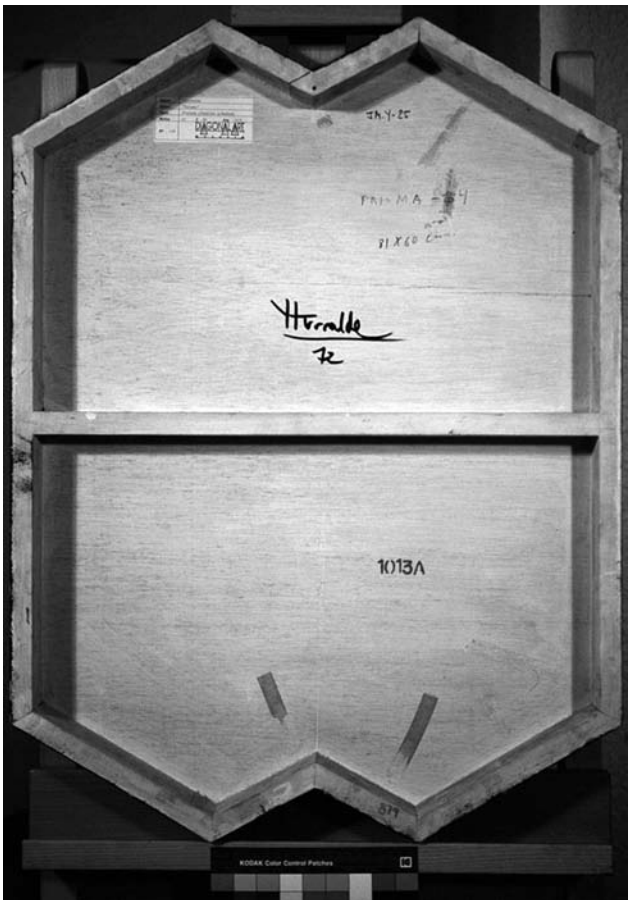


Figure2. Yturralde, José María, *Prism 4*, 1972, alkyd paint on wood derivative, back.

The nail system used for the construction of the work covers the entire perimeter and crosspiece, so these were the areas which displayed cracks and lifting. Likewise, the surface presented different chips and scratches, remains of glue, fly excrement, oil and grease stains due to its manipulation, as well as losses on the pictorial layer. In addition, the upper area had considerably deteriorated where an attempt to clean the work may be observed. The result obtained was strong abrasion and inadequate reintegration.

3. MATERIAL CHARACTERISATION: PHYSICAL-CHEMICAL ANALYSIS

The objective of the analysis was to identify the materials present in this work of art. To go about this, five microsamples of paint and wood were required, which were analysed using fluorescent optical microscopy, Fourier transform infrared spectroscopy (FTIR) and scanning electron microscopy – microanalysis via energy dispersive X-ray spectroscopy (SEM-EDXS).

In the microsample study, we determined that the paint was laid over a white primer composed of titanium white and plaster used as primary materials, and of smaller amounts of barium white and zinc white. The layers of paint were applied to this layer and presented a similar matrix. The above-mentioned white pigments were mixed this time with calcium carbonate and blue pigments, one of which corresponded to a synthetic organic colourant and the other to Prussian blue. The more or less intense shade of the blue layers was achieved by the amount of Prussian blue used. While there was very little Prussian blue in the first microsample, a larger amount appeared in in the second sample, and it was also identified to be the main material in the third sample.

The FTIR study revealed that a synthetic alkyd resin belonging to the group of unsaturated polyesters was the binding agent used by the artist. These resins have been widely used as binding agents in paintings since the 20th century[3].

4. RESTORATION WORK

Prism 4, created by Yturralde in 1972, is a piece which responds to a monochrome conception, in which the flat colours designed by the artist diffuse ideas through the material. The damage shown in *Prism 4* is part of the alterations which cause serious dysfunctions at aesthetic and material levels, and the deterioration on the object's surface clearly interrupts the artistic discourse.

The importance of the pictorial layer is much greater than that of pure materiality as the conceptualisation of the expressive system stems from the material itself. The aesthetic quality of the surface is closely related to the artist's creative discourse. Therefore we can conclude that the formal aspect of the work reveals the communication capacity of the object. The surface and concept of monochrome objects such as *Prism 4* are two aspects which bring about its enjoyment and aesthetic comprehension, two aspects which come to share the same value and which complement the complexity of the intellectual universe.

The concept is transmitted through the aesthetic quality and establishes a concrete formal value of the surface. The formal values complementarily develop the artistic discourse of the monochrome, and any small deviations in the formal particularities of the surface also involve a deviation in the aesthetic discourse of the object. For this reason, any alteration to the material surface of *Prism 4* equally

Figure 3. Detail of the cracks, deformations and lifting caused by the nail system used.

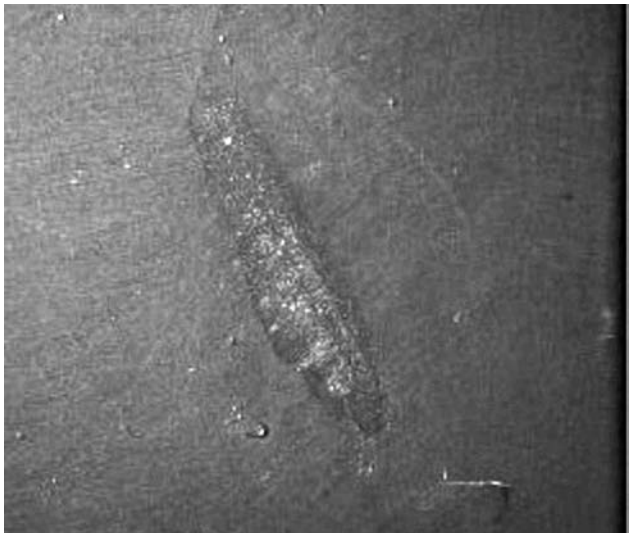


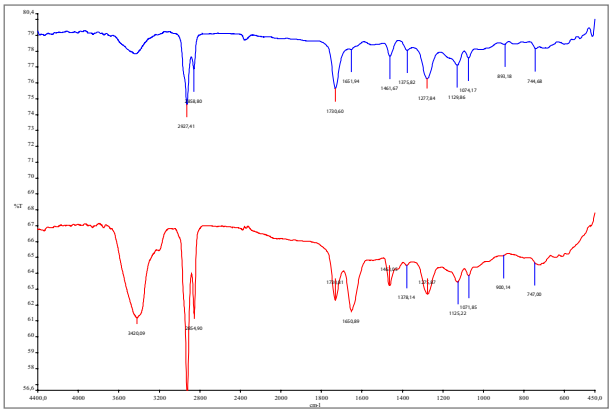
Figure 4. Area repainted as a result of a previous restoration attempt.

implies an alteration to its intellectual universe. Therefore, the objective of the restoration work should be the complete restoration of the meaning of the work, as well as reestablishing the artist's intention. In this sense, the formal values of the surface should be recovered so that the artist's message and intention are reestablished because when we restore the pictorial surface, we restore and recover the intellectual universe of *Prism 4*.

The interferences and distractions which may arise from the restoration work when it comes to visualising a monochrome geometric work mainly correspond to cleaning and reintegration interventions. These interventions may cause undesired chromatic changes on the surface which alter the collective perception of the work. During cleaning, but above all, during reintegration, considerable chromatic changes may take place because a perfect imitative reintegration on flat monochrome surfaces is unfeasible. For this reason, the use of such a procedure should be ruled out as any chromatic change would cloud the perception of the work and its intellectual universe. After having studied the discrepant factors that involve decision making, assessed the artist's intention and will and, most importantly, safeguarded the work in an intervention to rescue the idea or concept of the work, we decided to place the materials used in the work in the background.

The physical materiality of *Prism 4* is subordinated by the artist's intention and the meaning of the work, whose notions relegate the principle of authenticity through the integrity of the intellectual universe. The true importance or value of Yturralde's work of art

SAMPLE DESCRIPTION		**SAMPLES SENT SEPARATELY FOR THE STUDY OF THE BINDING AGENTS**	
Analysis report			
Method used for sample separation	Extraction with solvents of the organic material in the paint layers	Analysis techniques	FTIR



Observations: The blue and red spectra correspond to two of the blue colours. In both cases, the same type of material was identified, **an alkyd resin from the group of unsaturated polyesters.**

Identification of the material	**The material identified in both samples corresponded to an alkyd resin belonging to the group of unsaturated polyesters.**

lies in the aesthetic unity understood as a whole, rather than in the originality of a pictorial layer. As Yturralde pointed out in an extensive interview conducted for this intervention, "*I wish the work to be seen, and not a deteriorated original*"[1].

After studying the physical-chemical composition of the materials, analysing the intervention criteria and having learnt the artist's opinion, the time arrived to put the restoration work into practice. The aim of the proposal was to restore the pictorial layer. Therefore, it was necessary to obtain the same paint that the artist had used. The paint used was washable matt synthetic paint manufactured by *Titan*. During the sixties and seventies, due to the oil boom, the paint industry increased its types of paint mediums and colours and offered artists an extensive palette. However, due to the high cost of oil in subsequent years, the infinite range of paints was no longer produced.

The washable matt synthetic paint that Yturralde used in *Prism 4* reflects the problem as this paint is not currently available in the market. For this reason, we considered it necessary to contact the *Titan* paint company for a possible solution to this dilemma. At the same time, the chemical composition of the washable matt synthetic paint was required and requested[2].

The letter sent by Titan Industries about the composition of the materials was compared with the report prepared in the laboratory. To a great extent, the information issued by Titan corresponds to that reflected in the report: synthetic resin, barium white, titanium

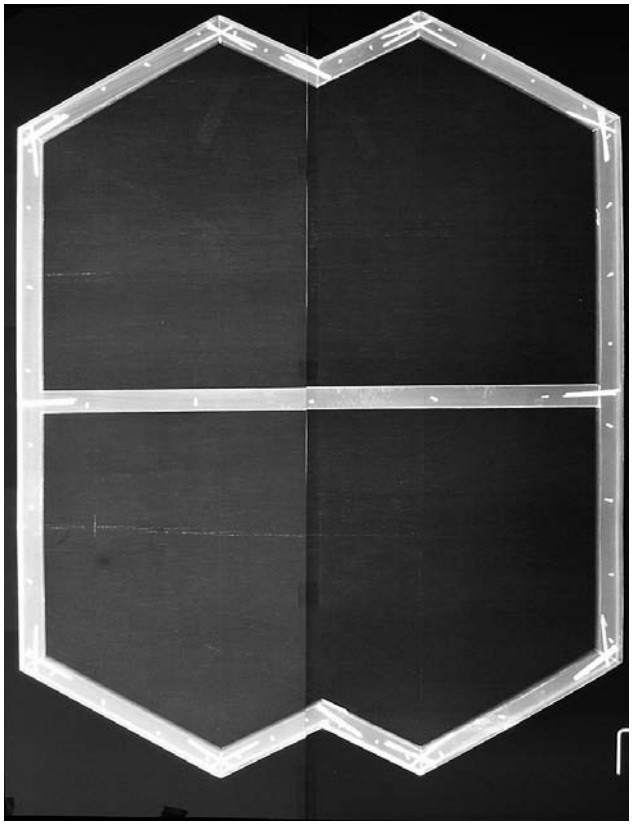


Figure 5. Radiography of *Prism* 4 by Yturralde. The nails in the work are perfectly visible, including those placed along the periphery and crosspiece, which have caused cracking and lifting of both the preparation and pictorial layers.

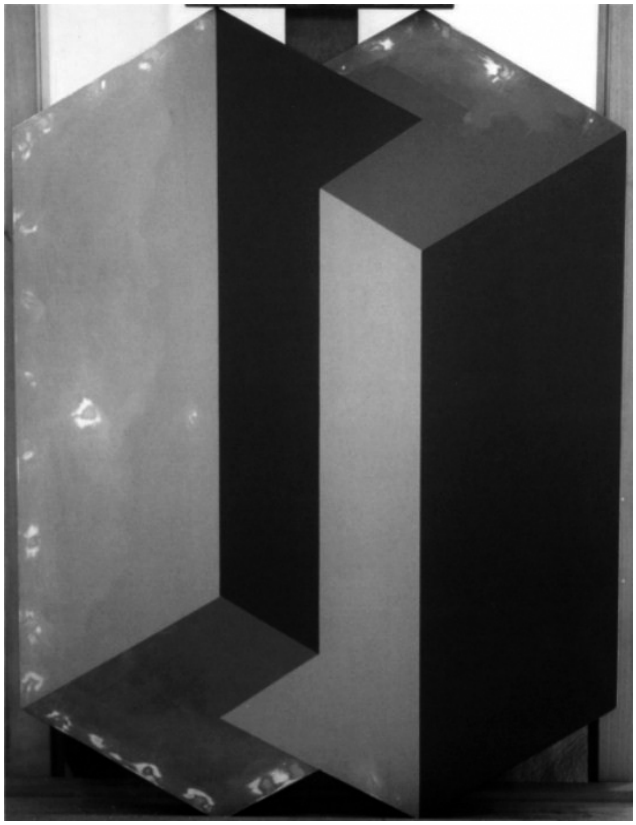


Figure 7. Aspect after filling.

Figure 6. Detail of the sanding of the layers of calcium carbonate.

Figure 8. During the application of the dark blue colour.

white and calcium carbonate. However, their report did not mention zinc white, but it would probably have been included in what Titan called "complex loads". Both reports highlight the fact that the white colouring was achieved using organic pigments.

Once the technical report of the materials was assessed, we had to obtain the Titan brand of washable matt synthetic paint in three different shades. For this purpose, a colorimetric study was designed which determined the exact shade of *Prism 4*. The study was possible thanks to the assistance of Titan's technicians who helped us to search for the three different shades of blue that the work presents. A Minolta CEC F-9 colorimeter was used which helped to manufacture the blues by using the white washable matt synthetic paint with different organic colourings. The colourings incorporated into the synthetic white corresponded to Light Blue E14-13, Intermediate Blue H03720 and Dark Blue H03720.

Once the paint production phase was complete, the time had arrived for the artist himself to paint the new pictorial layer. Yturralde was very satisfied with the result achieved for the shades, and considered this treatment appropriate for future problems with his works.

The primary obstacle of *Prism 4* was the system of nails which had caused cracking and lifting on the pictorial layer. At first, we considered extracting and substituting the nails, but we rejected this proposal because they were poorly secured to the support. For this reason, the nails were nailed and deeply inserted in order to prevent a new appearance of cracks and lifting.

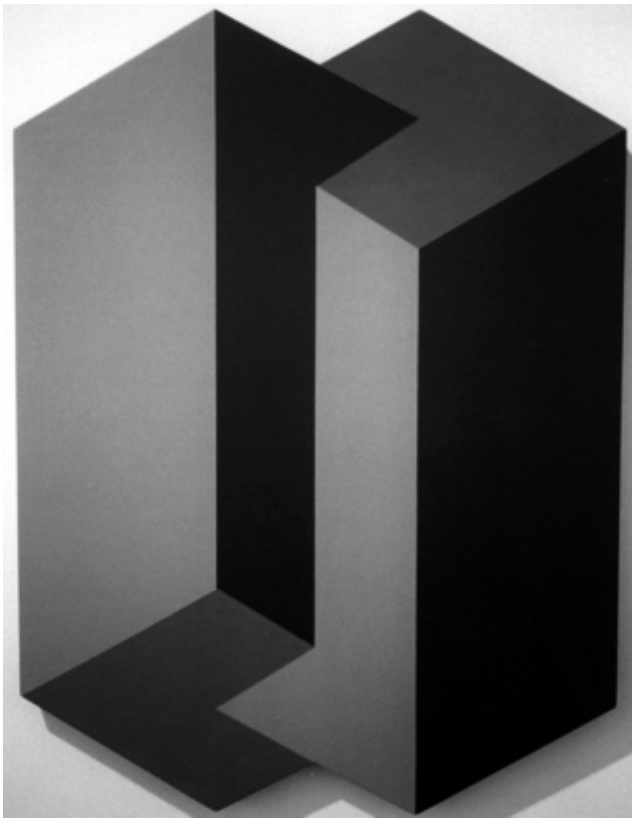


Figure 9. Yturralde, José María, *Prism 4*, **1972/2005**, alkyd paint on wood derivative. General photograph taken with visible light following the restoration process.

In 1972, due to his lack of knowledge of an appropriate construction technique for wood supports, Yturralde did not use any material to protect the paint from the rusting nails, which often caused serious lifting in his works. However between 1974 and 1975, a friend of his who made furniture recommended the use of calcium carbonate and PVC adhesive to protect against rust. After taking his friend's advice, no further cracking or lifting occurred as a result of the nails. As good results were obtained, and since it is a technique that this artist usually applies, this methodology was adopted as the method to isolate the nails.

The application of calcium carbonate and polyvinyl acetate was inconvenient in that the material underwent excessive shrinkage. For this reason, it had to be applied by creating up to 12 consecutive layers. The corresponding drying time was allowed for each layer.

Next, the successive applications of coating were smoothed to prepare the application of colour.

After finalising the preparation phase, the surface was ready to receive the new pictorial layer to restore an aesthetic communication capacity to the work. The coloured areas to be painted were marked using paper tape. Successive layers of paint were applied to each area of the macle, and an approximate average of 12 hours drying time between applications was allowed.

The dark blue colour was prepared by using washable white matt synthetic paint and organic dye H03640, and this was the first colour to be applied. Yturralde used a thick brush to extend the paint, and he achieved an extremely subtle texture.

A Titan matting agent was added to the different shades of blue to reduce any excessive shine produced by the paint. Even though the white base used to prepare the paint was matt, its application was necessary to obtain the desired shades. In addition, this matting agent was also applied for the painting of Prism 4 in 1972 for the previously indicated reasons.

No gloss was applied as a protective measure for the surface since it was not applied to Prism 4 in 1972.

5. CONCLUSIONS

The objective of the intervention performed on Yturralde's work of art was to recover the meanings and to reestablish the artist's intention, and to make these discrepant factors prevail over the authenticity of the material. The intervention criteria followed were based on the study of the discrepant factors of the interventions involved and which should precede any conservation-restoration work. This scenario presented a complex situation since the condition of the material affected the comprehension of the immaterial values of the work. The application of a critical methodology may result in different types of treatments according to the work's values and may, at times, generate apparent contradictions in the decision making.

ANNEXE

The report sent by Industrias Titan S.A. on its washable matt synthetic paint:

It is a matt synthetic paint with characteristics that are suitable for it to be applied with a brush or roller. It is formulated with alkyd resins, mostly based on dehydrated castor oil with complex loads, including precipitated barium sulphate, high purity and whiteness calcium carbonate, calcium and magnesium bicarbonate, and micronised talc which give it an appropriate finished texture.

The whiteness is achieved with titanium dioxide and the different shades are those provided from the organic pigments to the light.

Just as with any paint of this type, white is added, which currently continues to be manufactured and comprises 65% solid material in weight, and the density of this solid material is 2.8 once it has dried.

The solvents it contains, and which make its application possible on your surface, are low-toxicity or non-toxic petroleum derivatives, and their content and nature are clearly permitted by European regulations[6].

ACKNOWLEDGEMENTS

The authors would like to acknowledge the collaboration of artist, José María Yturralde, who kindly agreed to be interviewed and whose involvement allowed the conservation-restoration process of the work to be possible. Likewise, the authors specially thank Titan Industrias S.A. for its collaboration in providing important technical data and facilitating the making of the paints.

NOTES

[1] Yturralde, (1999), Exhibition catalogue, IVAM Julio González Centre, Autonomous Community of Valencia, Valencia:12

[2] Two symmetrically developed figures with a common face.

[3] Analysis performed by Andrés Sánchez Ledesma and Mª Jesús Gómez García, Arte-Lab S.L.

[4] The interview was held in the *La Nave* Gallery of Valencia on 31 March 2004. Soraluze Herrera, Ioseba I., (2006), *The conservation of contemporary works of art: degradations, intervention criteria and restoration treatments*, Doctoral Dissertation, Polytechnic University of Valencia: 331

[5] The letter sent by the Titan paint company is attached at the end of the text.

[6] Letter sent by Mr. Enrique Blanxart Senà, Paint Thinner Technical Director, El Prat de Llobregat, 21 May 2004.

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Versión española

TITULO: ***Cuando el universo intelectual de la obra de arte prevalece sobre la autenticidad de su estructura física.***

RESUMEN: *Las pinturas geométricas del artista español José María Yturralde, se caracterizan por un lenguaje plástico aséptico. Son obras de arte que ponen de manifiesto una especial importancia en la superficie. Prisma 4 de 1972 pertenece a la serie Figuras Imposibles, y responde a una investigación neoconstructiva experimental iniciada a finales de los 60. La obra, presentaba serios daños en la superficie pictórica debido a la técnica que empleaba el artista hasta 1973. En este trabajo presentamos los estudios previos realizados a la obra, la opinión del artista extraída de una entrevista personal, y el proceso de intervención llevado a cabo, especialmente significativo dadas las discrepancias establecidas entre el estado de conservación de la superficie y el concepto o idea de la obra.*

PALABRAS CLAVES: *arte contemporáneo, Yturralde, restauración, conservación, neoconstructivismo, monocromo*