



## DEDICATION TO PROFESSOR STEFAN DU CHATEAU

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**ABSTRACT:** The paper presents the person of professor Stephane Du Chateau, His short biography and professional achievements. There are shown some photos made during His stay on International Conference LSCE 1995 in Warsaw 25-29.09.1995, too. Moreover, are quoted some examples of spatial systems and structures designed by Him.

**Key words:** Stephane Du Chateau, Unibat, Pyramitec, Tridimatec, Spherobat, wood, bamboo, steel, space structures, systems

### 1. SHORT BIOGRAPHY OF STEPHANE DU CHATEAU (Ref 1)

Great grandfather of Stephane Du Schateau – Pierre Du Chateau after Napoleon campaign 1812 found refuge and aid in one of Poland's manor houses. There was married to Pole – Miss Anna Pawłowska. and stay in Poland. After years, Stephane Pierre Du Chateau was born in Solwyczegodzk on Syberia on August 30, 1908. After amnesty for His father, He was coming back to Hrubieszów. Poland.



Fig.1 Stephane Du Chateau

He became the education in grammar school in Hrubieszów and Lublin. In 1930 starts studies at the Department of Architecture of the Lvov University of Technology. During the studies commenced his professional carrier. Unfortunately He did not manage to graduate prior to the outbreak of the war. He was enlisted to army on 23 August, 1939 and took part in September Campaign. Next, across Hungary and through Yugoslavia and Italy reach France on 18.12.1939. There is enclosed as the commanding officer of platoon to the II Division of the Polish Army in Partenay. In the spring of 1940 was fighting on the north-eastern border of France. On 1.07.1940 is taken prisoner by the Germans. Up to March 1945 is in Hoyeswerda Oflag IV D. There was certain possibility to professional training. After the war is continuing His specialization in Urban Planning Institute of the University of Paris. There He become title "compositeur des plans d'urbanisme". In 1947 He got diploma of the School of Architecture of the Polish University College in London.

In period 1945-49 is engaged by Marc Briaud de Laujardié Bureau. In 1949 takes the post of technical director of the "Tubétal" Tubular

Construction Company. In 1953 he found own architectural and structural consulting office in Paris. In this year he receives French citizenship. He marries a Polish architect Krystyna Anna Szeronos.

In professional activity He was concentrated on space bar structures. His structures are built in France, Poland, Russia, Africa, Asia, USA, Tahiti, Madagascar, Tanger etc.

Since 1967, He has been a teacher at the Department of Architecture of Parisian L'Ecole des Beaux Art and later at the Unité Pedagogique d'Architecture in Paris and also abroad in Montreal, Canada (1976). Numerous his exhibitions were worldwide, including Poland (1972-1995). Stephane du Chateau become degree of Doctor honoris causa of Surrey University, UK 1971 and many other honours in Mexico, Paris and Warsaw.

### 2. STEPHANE DU CHATEAU DURING LSCE 1995 IN WARSAW

He has in 1995 in Warsaw University of Technology own exhibition and general lecture.



Fig.2 Rector profM.Dietrich, dean profM. Knauff, prof J.B.Obrębski and Stephane Du Chateau at the moment before LSCE opening ceremony, 25.09.1995



Fig.3 Opening ceremony of exhibition presenting His achievements



Fig.4 On exhibition presenting His achievements



Fig.5 Stephane Du Chateau and Z.S. Makowski



Fig.6. In the front profs Z.S. Makowski and Stephane Du Chateau after lecture



Fig.7. Stephane Du Chateau during banquet in Forum Hotel

### 3. EXHIBITS PRESENTED ON WARSAW EXHIBITION

During the LSCE International Conference in Warsaw were presented

some exhibitions. The biggest belong to professor S. Du Chateau. Some exhibits after conference stays for didactic purposes on Faculty of Civil Engineering in Warsaw.

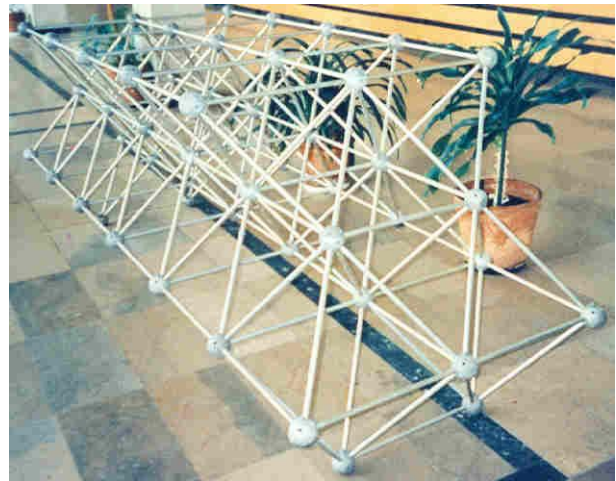


Fig.8 Example of three-layer structure



Fig.9 Strength testing.....

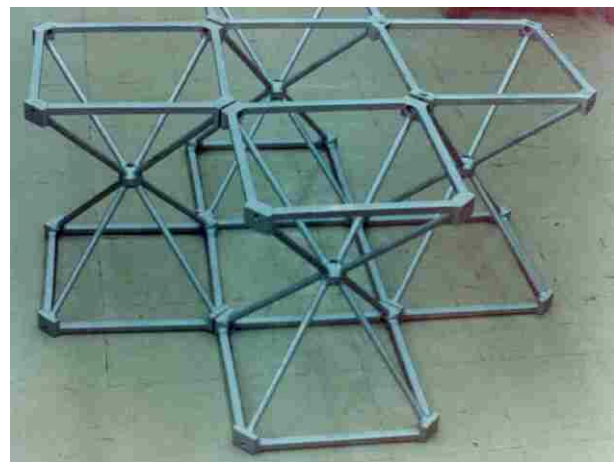


Fig.10 Other example of three-layer structure on basis of UNIBAT elements

Among the others, there were shown in the Figs 8-16 elements of elaborated by Him original space bar structures. It can be mentioned here samples of steel structures of SPHEROBAT, UNIBAT, PYRAMITEC and SDC systems. Professor S. Du Chateau was bringing to Faculty of Civil Engineering of Warsaw University of Technology, by large mini-bus some models, posters, nodes and quite large parts of space structures.

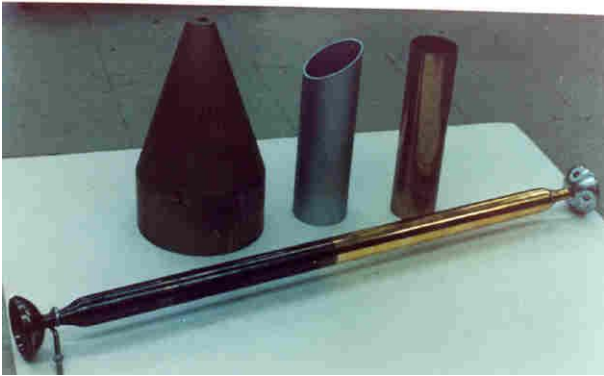


Fig.11 parts of nodes and bar of SPHEROBAT system

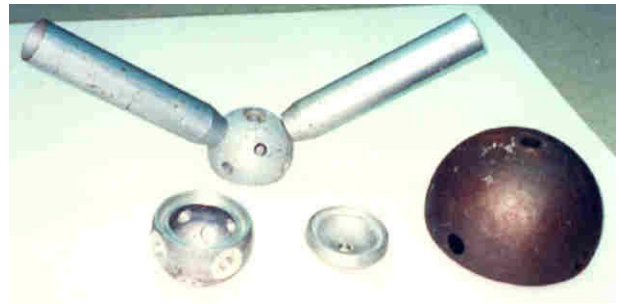


Fig.15 Elements of different size nodes of SPHEROBAT system

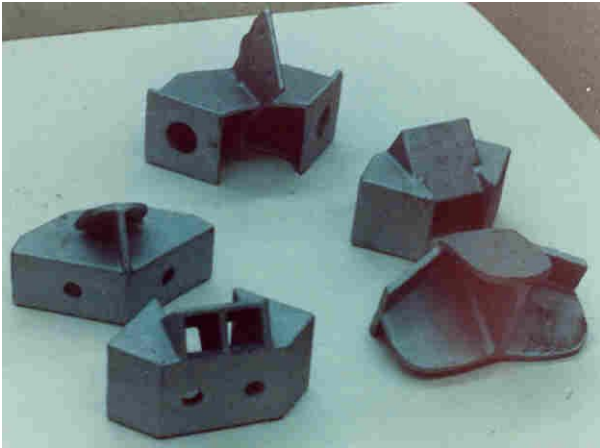


Fig.12 Components of node



Fig.16 Elements of SDC node for tubular single layer, three way structure



Fig.13 Components of node

#### 4. STRUCTURES DESIGNED BY STEPHANE DU CHATEAU

Professor S. du Chateau was designing structures in steel, aluminium, wood, bamboo and plastic. Each one His structure was elegant and economical - with small material consumption. Below are presented a few of them, only.

##### 4.1. Example of wooden structure



Fig.17 Wooden structure of the church in Libramont

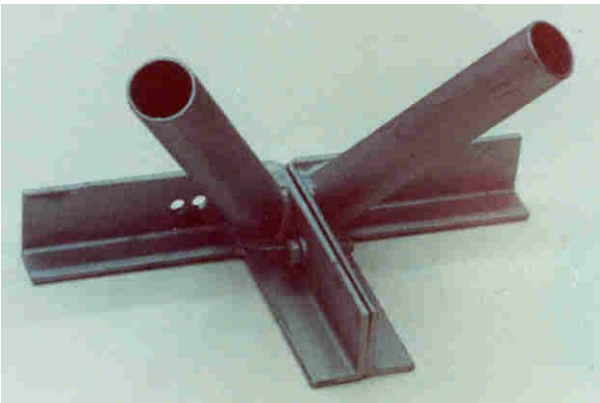


Fig.14 Node of PYRAMITEC system



Fig.18 Closing up of wooden structure of the church in Libramont

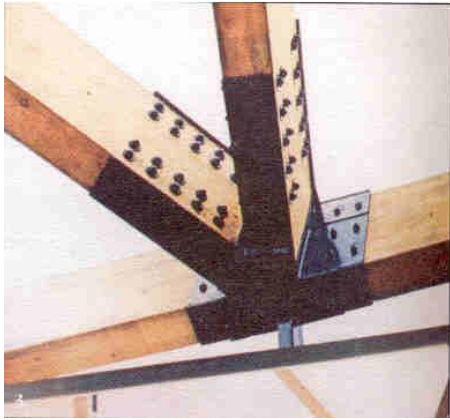


Fig.19 Detail of wooden structure

**4.2. Space bar structure from bamboo – BAMBOUITEC**



Fig.20 Node of structure with bamboo members

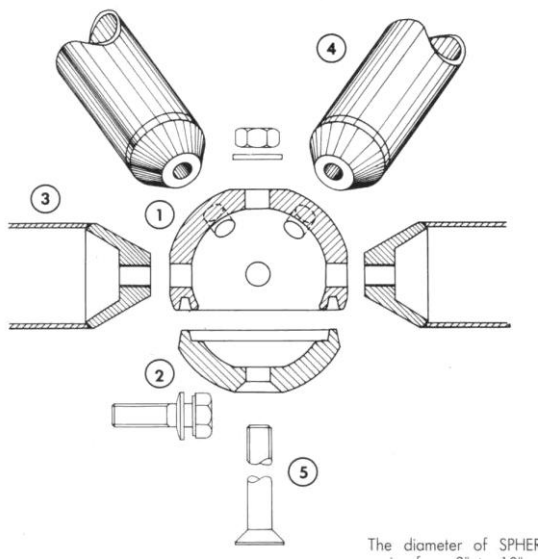
**4.3. Original space bar systems for steel structures**

In whole professional activity, S. du Chateau was elaborated many new types of space bar structures. There can be mentioned following systems:

Tridimensionelle SDC (1958 - for three way double layer tubular bars), PYRAMITEC (1960), BACOTEC (1965 – for flats and flat roofs), UNIBAT (1968), TRIDIMATEC (as SDC but simplified), SPHEROBAT (1984), Mini-Unibat, TRIDIBAL, BAMBOUITEC (1984), FLOTAL, PYRAMIBAT (1984), CRICOTEC, BICÔNE, Ref 1.

Below are presented a few structural systems elaborated by S. du Chateau, only. The next data you can find in Refs 2.3.

**4.3.1. SPHEROBAT system**



The diameter of SPHE

Fig.21 Node of SPHEROBAT system



Fig.22 SPHEROBAT system node

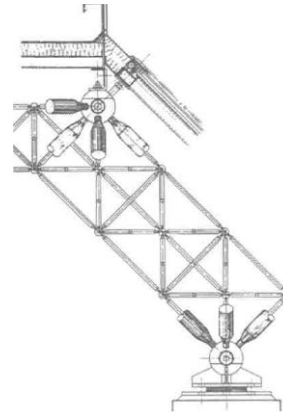


Fig.23 Structural principle of linking the SPHEROBAT system



Fig.24 Example of space bar roof

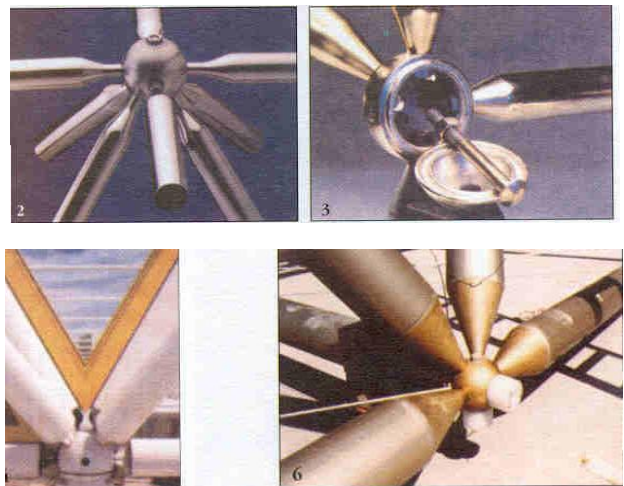


Fig.25 Structural details of SPHEROBAT system

**4.3.2. TRIDIMATEC system**

It consists of the flat elements of a tubular lattice produced in the factory. They are coupled into two layers on site applying bolts and two- or three-way system of intersecting trusses. Depending on the used ways, system is defined as: bi-directional TRIDIMATEC or tri-directional TRIDIMATEC.

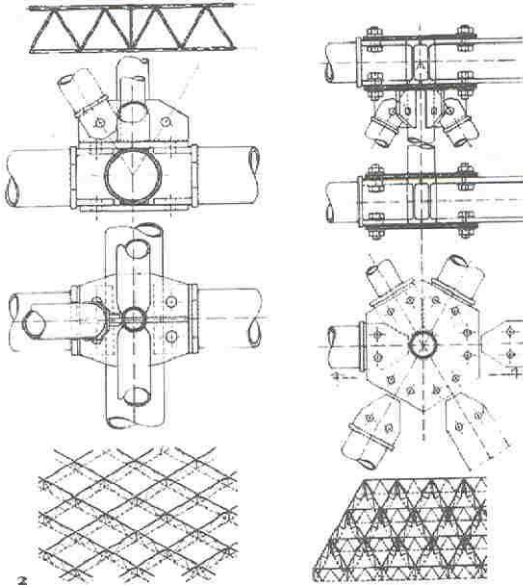


Fig.26 TRIDIMATEC system

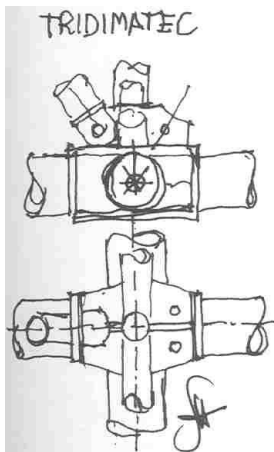


Fig.27 Freehand drawings of the node of TRIMATEC system

**4.3.3. PYRAMITEC system**

It consists of pyramids build from steel tubes with bases as : squares, hexagons and triangles, Refs 1, 2.



Fig.28 PYRAMITEC component

**4.3.4. UNIBAT system**

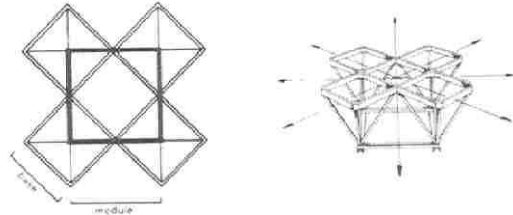


Fig.29 Idea of UNIBAT system

**4.4. Designed objects**

Here are presented without comments some examples objects designed and erected in Stephane Du Chateau systems.

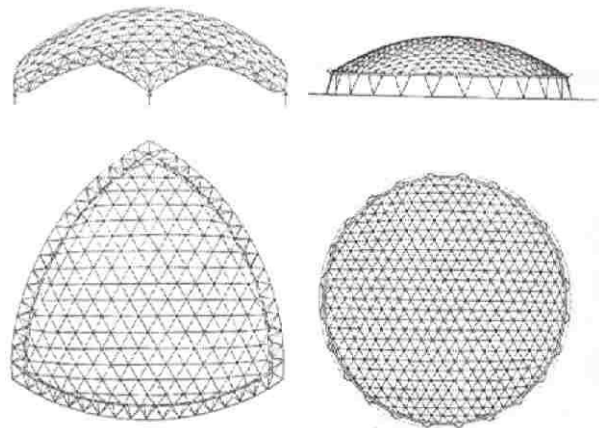


Fig.30 Market hall in Agadir and swimming pool in Drancy, Ref 1

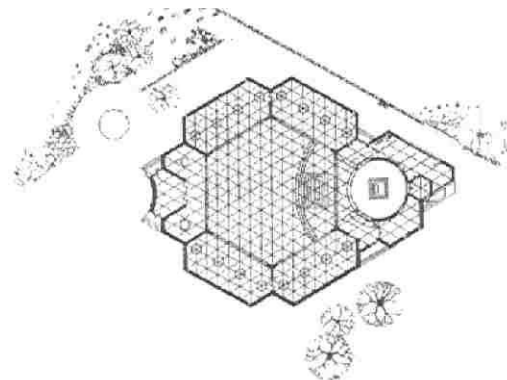


Fig.31 Plan of the Church of St. John Baptist in Chartres-Rechèvres, Ref 1,3

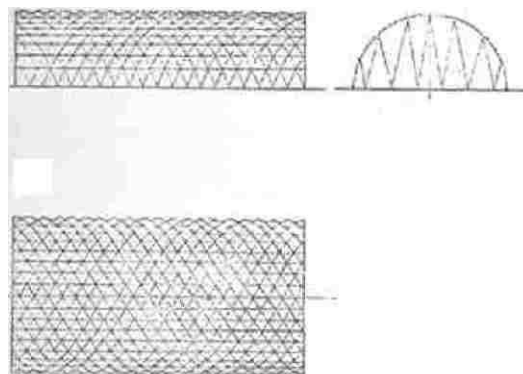


Fig.32 Plan, section and elevation of the tennis hall, Ref 1

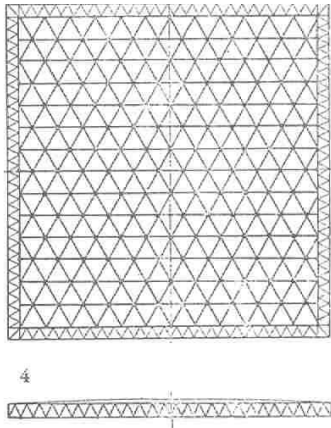


Fig.33 Roof plan of the swimming pool in Boulogne-Billancourt, Ref 1

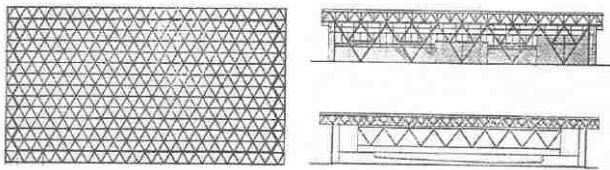


Fig.34 La Rochelle swimming pool, plan, section and elevation, Ref 1

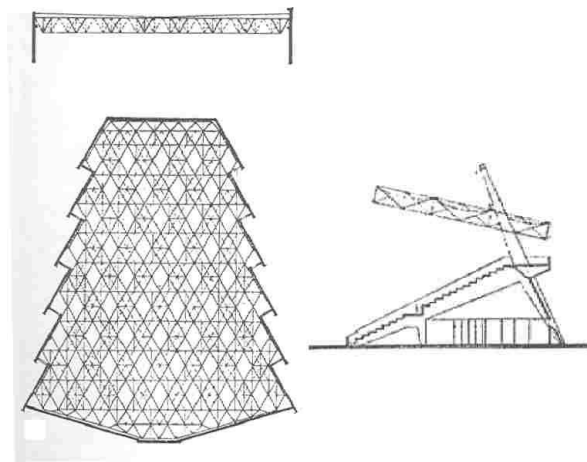


Fig.35 Plan of church of Notre Dame des Foyers in Paris and section of tribunes of the Laval stadium

## 5. COOPERATION WITH POLAND

Professor Stephane du Chateau in whole His live was strongly serving for His faterland – Poland. Always He was excellently speaking Polish. He cooperates with Polish Design Offices: Mostostal Central Metal Structure Research and Design Center of Warsaw (later Mostostal-Project S.A.),

Employed in His Parisien studio were: Krzysztof Łypacewicz (1966), Jacek Kordjak (1976-77), Włodzimierz Konopka, Adam Ofmański, Piotr Próchniak, Marek Rudłowski.

Similar contacts with His Parisien Studio or as visitors have: Jan Karczewski, Mieczysław Lubiński (1973, both Warsaw), Zbigniew Kowal (Kielce), Wiesław Nurek (Lublin).

In Poland were erected many objects based on S. Du Chateau systems:  
 - PYRAMITEC – more than 200 halls (UNIPRO designing office, Warsaw), 3 churches in Lublin (by W.Nurek) and many others.  
 Moreover, numerous orthogonal and diagonal space bar systems designed by MOSTOSTAL, were based or similar to s. Du Chateau PYRAMITEC or UNIBAT systems.

The detailed data about the cooperation or influence of ideas of S. Du

Chateau on Polish building industry, are given in the book Ref 1, Fig 36.

In 1995 was started preparations to give for professor Stephane Du Chateau degree of Doctor honoris causa of Warsaw University of Technology. For certain, unintelligible reasons it was not realised....

It is worthy to mention, that He was attending the IASS Symposia in Poland, 1963 (Warsaw), 1973 (Kielce), and 1995 (Warsaw – Advisory Board). On my invitation to take part in Scientific Committee of LSCE 1998, He not answer.... He passed away in 1999.

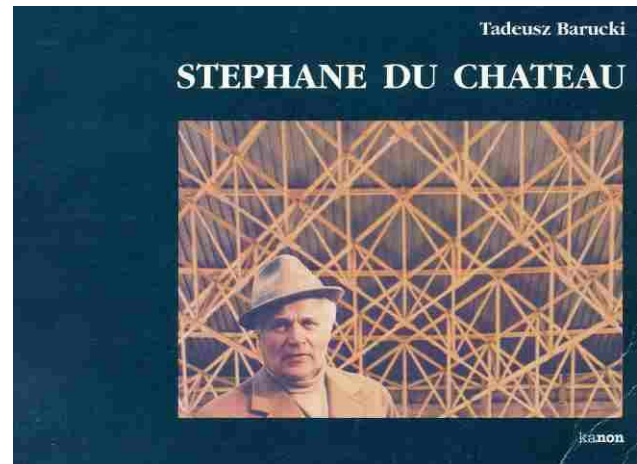


Fig.36 Cover of the book about live achievements of Stephane du Chateau, prepared for purpose of procedure Doctor honoris causa

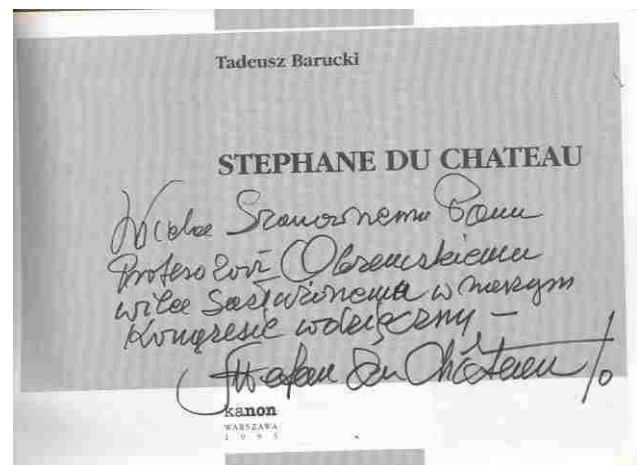


Fig.37 Personal dedication at app. 27.09.2004

## 6. OTHER ACTIVITY OF STEPHANE DU CHATEAU

In last years of His live, Stephane Du Chateau allowed to recognize as painter. His paintings are in water colour, gouaches, canvases in oil. As themes are architectural and landscape impressions. In Ref 1, are presented some of them concerning of: Nicea, Arles, Saint Didier, Bessoines

## 7. REFERENCES

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3. Z.S.Makowski: Development of jointing systems for modular prefabricated steel space structures. Proceedings of LSCE 2002 International IASS Symposium, Micro Publisher, 24-28.06.2002, Warsaw, Poland, pp. 17-41.

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