

CAPuS PROJECT – CONDITION REPORT (WALL PAINTING AND SCULPTURE)

1. GENERAL DATA	
NUMBER OF PARTNER:	10 (University of Split)
TYPE OF WORK:	Sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	The park flanked by Marijan Cvetković and Kavurić Brothers streets (Ulica Marijana Cvetkovića i Ulica braće Kavurić)
OWNER / CUSTODIAN:	City of Sisak / Sisak Municipal Museum
LEGAL PROTECTION:	Protected cultural property (inscribed in the Register of Cultural Goods of the Republic of Croatia: Z-5733)
ARTIST:	Dušan Subotić
TITLE OF THE WORK:	<i>Relief in Space</i> (Croatian: <i>Reljef u prostoru</i>)
YEAR OF EXECUTION:	1981
MATERIALS:	Steel, painted (?)
DIMENSIONS (cm):	Height (sculpture, metal base): 70 cm Width (sculpture, metal base): 145 cm Depth (sculpture, metal base): 39.2 cm
2. DESCRIPTION OF THE PROBLEM (DEGRADATION)	
PRIMARY CAUSES (RELATED TO THE TECHNIQUE, TECHNOLOGY AND LOCATION OF THE OBJECT)	
	FACTORS RELATED TO THE CONSTRUCTION BASE / SCULPTURE BASE MATERIAL
	CONCRETE
	CEMENT
	BRICK
	REINFORCED CONCRETE



	WOOD	
	METAL	Joints between the metal sheets that form the base of the sculpture have opened up. This might be due to the method of joining the metal sheets (it is speculated that tack/spot welding was used as a method of joining).
	OTHER	
	MATERIALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	
	MATERIALS USED TO MAKE POLICHROMY (PAINTING MATERIALS)	
	BINDER	Coating is only partially preserved. It is chromatically altered.
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELY AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	The sculpture, of which only the metal base has been preserved, is anchored into a low concrete plinth. Leaves and dirt collect on the concrete plinth and around the bottom of the sculpture, which contributes to deterioration of metal (steel has heavily corroded in that zone and holes have opened up). The lower part of the sculpture is soiled.
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	Leaves and dirt, which collect around the bottom part of the sculpture, retain water, which contributes to corrosion. Water/humidity retention around the bottom of the sculpture is especially problematic during the rainy seasons (autumn, winter, but also spring).



LATER INTERFERENCES		
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	<p>The relief that formed the upper part of the sculpture has been stolen. It is not known when this happened, and the perpetrators have never been found. It can be assumed that the relief was sold as scrap metal.</p> <p>Graffiti are present on the side of the sculpture that faces south ("REX" has been spray-painted), as well as traces/drippings of white paint.</p> <p>Scratches are present on the side of the sculpture that faces north.</p>
THERMAL-HUMIDITY FACTORS		
	CAPILLARY MOISTURE	
	MOISTURE CONDENSATION	Water condensates inside the sculpture (i.e. inside the metal base).
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS AND/OR BUILDING INTALATIONS	Welding joints have opened up and rainwater is penetrating into the sculpture. Water accumulates on the top of the metal base. Water retention accelerates deterioration of the metal.
	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	The sculpture is installed outdoors, so the temperature fluctuates constantly. In the warmer months of the year, daily temperature fluctuations are probably not extreme, since the sculpture is not exposed to direct sunlight (it is protected by trees).
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)	
	SEASONAL FROST PENETRATION	During the winter temperatures in Sisak fall below 0 °C, so any water accumulated on the top of the metal base or inside the sculpture friezes.
	EXPOSITION ON LIGHT	The sculpture is protected from direct sunlight by trees.
	HIGH TEMPERATURE INFLUENCE	

PHYSICO-CHEMICAL FACTORS		
	AIR POLLUTION	Sisak used to be a big industrial centre. The sculpture is installed in the vicinity of steelworks and petroleum refinery, so air pollution must have contributed to its deterioration (there must have been acid rains).
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	The surface of the sculpture is almost completely corroded. Pitting corrosion is present. Corrosion has caused material loss at the bottom of the sculpture. On the top plate of the metal base (i.e. on the steel sheet to which the relief was attached) the names of the artist and his assistants, which were made by welding, are now almost completely lost due to corrosion ("AUTOR: DUŠAN SUBOTIĆ (...) ROŽANKOVIĆ, MATOKOVIĆ, MARTINOVIĆ [?]").
BIOLOGICAL FACTORS (biological colonisation, biofilm)		
	ANIMAL ACTIVITIES	
	MICROORGANISMS	Microorganisms are visible on the top plate of the metal base, as well as around the metal base's bottom.
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	Trees surround the sculpture. Its leaves collect on the flat surfaces of the sculpture and on the concrete plinth. Leaves (and dirt) retain water, which contributes to corrosion. Trees also attract birds and produce sap, which soils the sculpture.
MECHANICAL FACTORS		
	MECHANICAL INJURIES	
	ABRASIONS	
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Because of the trees that surround it, the sculpture is not very visible. There is no light in the vicinity. Due to these factors, the sculpture presents an easy target for vandals.
	INDUSTRIALIZATION	



OTHERS

The effects of deterioration reported in this document have been identified based on the study of photographic documentation produced in 2013 and 2016, and the visual inspection of the sculpture in 2018.

It can be ascertained that the loss of the upper part of the sculpture is due to vandalism/theft.

The most likely cause of steel corrosion is exposure to water/humidity. Other factors contributing to corrosion can only be hypothesized.

No explanation has been provided in this report for the loss of the coating.





SURFACE – LOSS OF COHESION		SURFACE – LOSS OF MATERIAL		SURFACE – DEFORMATION	
COLLAPSE	<input type="checkbox"/>	LOSS	X	DEFORMATION	X
DISINTEGRATION	X	LACUNA	<input type="checkbox"/>	SHRINKAGE	<input type="checkbox"/>
POWDERING	<input type="checkbox"/>	EROSION	<input type="checkbox"/>	SWELLING	<input type="checkbox"/>
CRUSHING	<input type="checkbox"/>	ABRASION	<input type="checkbox"/>	DEPRESSION	<input type="checkbox"/>
CRUMBLING	<input type="checkbox"/>	WEAR	<input type="checkbox"/>	BLISTERING	<input type="checkbox"/>
TEARING	<input type="checkbox"/>	CHAFE	<input type="checkbox"/>	BUCKLING	<input type="checkbox"/>
CUTTING	<input type="checkbox"/>	ROUNDED	<input type="checkbox"/>	WARPING	<input type="checkbox"/>
INCISION	<input type="checkbox"/>	PERFORATION	<input type="checkbox"/>	TORSION	<input type="checkbox"/>
FRACTURING	<input type="checkbox"/>	PITTING	<input type="checkbox"/>	BEND	<input type="checkbox"/>
CRACKING	<input type="checkbox"/>	GALLERY	<input type="checkbox"/>	ROUGHENED	<input type="checkbox"/>
SPLITTING	<input type="checkbox"/>	CAVITY	<input type="checkbox"/>		
OPEN JOINT	<input type="checkbox"/>	SCRATCH	<input type="checkbox"/>		
DELAMINATION	<input type="checkbox"/>				
FLAKING	<input type="checkbox"/>				
SCALING	<input type="checkbox"/>				



<u>SURFACE – OPTICAL ALTERNATION</u>	<u>SURFACE – CHEMICAL AND BIOLOGICAL ALTERNATION</u>	<u>SURFACE – ADDITION OF SUBSTANCES</u>
CHROMATIC ALTERNATION		
DARKENING	BURNING	DEPOSIT
FADING	CORROSION	DUST
YELLOWING	CRUST	ACCRETION
BLOOMISH	EFFLORESCENCE	CONCRETION
STAINING	EMBRITTLLED	FILM
SPOTTING	EXUDATION	SOILING
	PATINA	GRAFFITI
	BIOLOGICAL COLONISATION	INCLUSION
	BIOFILM	INFILL

* mark







<u>SURFACE – LOSS OF COHESION</u>	<u>SURFACE – LOSS OF MATERIAL</u>	<u>SURFACE – DEFORMATION</u>
COLLAPSE <input type="checkbox"/>	LOSS X	DEFORMATION <input type="checkbox"/>
DISINTEGRATION <input type="checkbox"/>	LACUNA <input type="checkbox"/>	SHRINKAGE <input type="checkbox"/>
POWDERING <input type="checkbox"/>	EROSION <input type="checkbox"/>	SWELLING <input type="checkbox"/>
CRUSHING <input type="checkbox"/>	ABRASION <input type="checkbox"/>	DEPRESSION <input type="checkbox"/>
CRUMBLING <input type="checkbox"/>	WEAR <input type="checkbox"/>	BLISTERING <input type="checkbox"/>
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CUTTING <input type="checkbox"/>	ROUNDED <input type="checkbox"/>	WARPING <input type="checkbox"/>
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FRACTURING <input type="checkbox"/>	PITTING <input type="checkbox"/>	BEND <input type="checkbox"/>
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OPEN JOINT <input type="checkbox"/>	SCRATCH <input type="checkbox"/>	
DELAMINATION <input type="checkbox"/>		
FLAKING <input type="checkbox"/>		
SCALING <input type="checkbox"/>		



<u>SURFACE – OPTICAL ALTERNATION</u>	<u>SURFACE – CHEMICAL AND BIOLOGICAL ALTERNATION</u>	<u>SURFACE – ADDITION OF SUBSTANCES</u>
CHROMATIC ALTERNATION <input type="checkbox"/>	BURNING <input type="checkbox"/>	DEPOSIT <input type="checkbox"/>
DARKENING <input type="checkbox"/>	CORROSION X	DUST <input type="checkbox"/>
FADING <input type="checkbox"/>	CRUST <input type="checkbox"/>	ACCRETION <input type="checkbox"/>
YELLOWING <input type="checkbox"/>	EFFLORESCENCE <input type="checkbox"/>	CONCRETION <input type="checkbox"/>
BLOOMISH <input type="checkbox"/>	EMBRITTLED <input type="checkbox"/>	FILM <input type="checkbox"/>
STAINING <input type="checkbox"/>	EXUDATION <input type="checkbox"/>	SOILING <input type="checkbox"/>
SPOTTING <input type="checkbox"/>	PATINA <input type="checkbox"/>	GRAFFITI X
	BIOLOGICAL COLONISATION X	INCLUSION <input type="checkbox"/>
	BIOFILM <input type="checkbox"/>	INFILL <input type="checkbox"/>

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