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:	Croatian Statehood Square / Trg hrvatske državnosti, Sisak
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:	Branko Ružić
TITLE OF THE WORK:	*Door* (Croatian: *Vrata*)
YEAR OF EXECUTION:	1984
MATERIALS:	Painted steel
DIMENSIONS (cm):	Height (sculpture): 370 cm Width (sculpture): 244.5 cm Depth (sculpture): 25.5 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	The bottom-elements of the supporting construction, which consists of seamless tubes and clamps, are corroded. The impaired structural integrity of the clamps can affect the stability of the whole construction. The relief panels are made of welded steel plates. The joins between the plates are not perfectly welded, so the water enters through crevices, and collects inside the structure. This has resulted in severe corrosion of the bottom parts of the relief plates and significant loss of material.
		OTHER	
	MATERIALS USED FOR COATING, PLASTER		
		BINDER	
		FILLER	
	MATERIALS USED TO MAKE POLICHROMY (PAINTING MATERIALS)		
		BINDER	In the topcoat, chromatic alteration is evident. It can be hypothesized that these changes were caused by sunlight exposure. On the front side of the sculpture, the base coat is exposed in localized areas. Some of the damage extends all the way to the metal support. The wear could have resulted from some mechanical action.
		PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE		
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY AFFECTING ITS LASTING		
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	The sculpture is installed on a paved square in the Sisak Steelworks housing estate, which has not received maintenance in a long time. Pavement surface irregularities result in localized water collection. The tree overgrowing the sculpture contributes to the deterioration of the supporting construction; leaves, dirt and trash collect around the horizontal tubes.
		TECTONIC MOVES	

		VIBRATIONS, SHAKES	Trucks delivering goods to a nearby grocery store can be a cause of vibrations. Children climbing on the sculpture can also cause vibrations and shakes.
		SOIL DAMP	
LATER INTERFERENCES			
	REPARATIONS		
	RENOVATION OF A BUILDING		
	SETTING UP A NEW INSTALLATIONS		
	REPAINTING		
	LATER CONSERVATIONS-RESTAURATIONS		
	VANDALISM		Although it is installed on a square in a very populated neighbourhood, the sculpture has been vandalized (it has been spray-painted and scratched). Its backside has served as a bulletin board; there are traces of adhesive tape and paper announcements and advertisements that were glued to the relief panels.
THERMAL-HUMIDITY FACTORS			
	CAPILLARY MOISTURE		
	MOISTURE CONDENSATION		
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS AND/OR BUILDING INTALATIONS		The sculpture is directly exposed to rain and snow. The water enters the relief panels through open joins, and collects inside the sculpture. This has resulted in extensive corrosion and loss of material.
	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THERMAL FACTORS			
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)		The sculpture is installed outdoors, so the temperature fluctuates constantly.
	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 in the sculpture would frieze.

	EXPOSITION ON LIGHT	The backside of the sculpture is directly exposed to sunlight. The tree growing near the sculpture provides some shade in the morning hours.
	HIGH TEMPERATURE INFLUENCE	During summer, especially at midday.
PHYSICO-CHEMICAL FACTORS		
	AIR POLLUTION	Sisak used to be a big industrial centre. The sculpture is installed in a housing estate located in the vicinity of steelworks and petroleum refinery. Air pollution could have contributed to its deterioration (if here were acid rains in the past).
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	Corrosion is present in the bottom parts of the relief plates, and has resulted in loss of material.
BIOLOGICAL FACTORS (biological colonisation, biofilm)		
	ANIMAL ACTIVITIES	
	MICROORGANISMS	Microorganisms are visible on the surface, especially on the backside of the relief plates.
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	A tree grows near the sculpture, and its branches cover the upper left relief panel.
MECHANICAL FACTORS		
	MECHANICAL INJURIES	
	ABRASIONS	
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF HUMANS	The sculpture is easily accessible. The area has a lot of pedestrian traffic: garbage containers are placed close to the sculpture, there are two stores in the vicinity, and school children regularly cross the square on their way to school and bus.
	INDUSTRIALIZATION	

OTHERS

The effects of deterioration reported in this document have been identified based on the study of photographic documentation produced in 2012, 2013, 2015 and 2016, and the visual inspection of the sculpture in 2018.

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

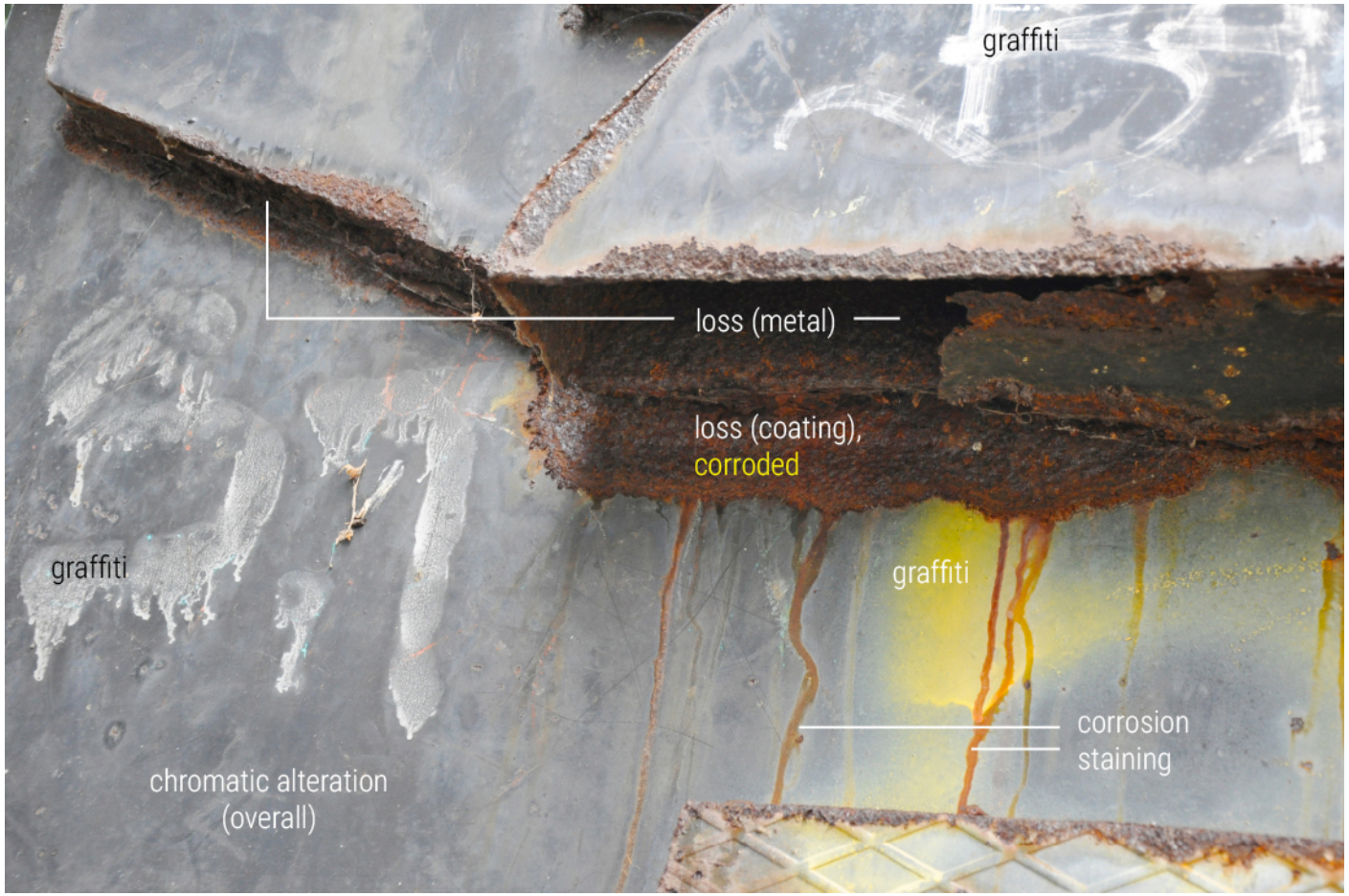
The sculpture was dismantled in summer 2019, and is currently stored at the Sisak Municipal Museum. The conditions in the storage are far from ideal.


loss (coating),
corroded
chromatic
alteration (overall)
graffiti
loss (top coat)
loss (coating),
corroded

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

SURFACE – OPTICAL ALTERNATION		SURFACE – CHEMICAL AND BIOLOGICAL ALTERNATION		SURFACE – ADDITION OF SUBSTANCES	
CHROMATIC ALTERNATION	X	BURNING	☐	DEPOSIT	☐
DARKENING	☐	CORROSION	X	DUST	☐
FADING	☐	CRUST	☐	ACCRETION	☐
YELLOWING	☐	EFFLORESECENECE	☐	CONCRETION	☐
BLOOMISH	☐	EMBRITTLED	☐	FILM	☐
STAINING	☐	EXUDATION	☐	SOILING	☐
SPOTTING	☐	PATINA	☐	GRAFFITI	X
		BIOLOGICAL COLONISATION	☐	INCLUSION	☐
		BIOFILM	☐	INFILL	☐

* mark ☒


graffiti
loss (metal)
loss (coating),
corroded
graffiti
graffiti
corrosion
staining
chromatic alteration
(overall)

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loss (coating), corroded
biological
colonisation

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SPOTTING	☐	PATINA	☐	GRAFFITI	☐
		BIOLOGICAL COLONISATION	X	INCLUSION	☐
		BIOFILM	☐	INFILL	☐

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loss (coating), corroded
loss (coating), corroded
adhesive tape, adhesive
glued
paper
sticker
graffiti

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* mark ☒

This document was produced within the project ***Conservation of Art in Public Spaces (CAPuS)***.

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