NARGOMIST 70

tema sistemi®
FIRE TECHNOLOGY

CULTURAL HERITAGE FIRE PROTECTION

NARGOMIST 70 THE ONLY WATERMIST SYSTEM
TESTED AND CERTIFIED TO PROTECT
PRICELESS WORKS AND ENVIRONMENTS IS BORN

NARGOMIST 70

If there is on earth, and among all these things of nothing, a belief worthy of adoration, if there is anything holy, pure and sublime, anything answering that immoderate desire for the infinite and the vague that we call the soul, it is art.

(Gustave Flaubert)

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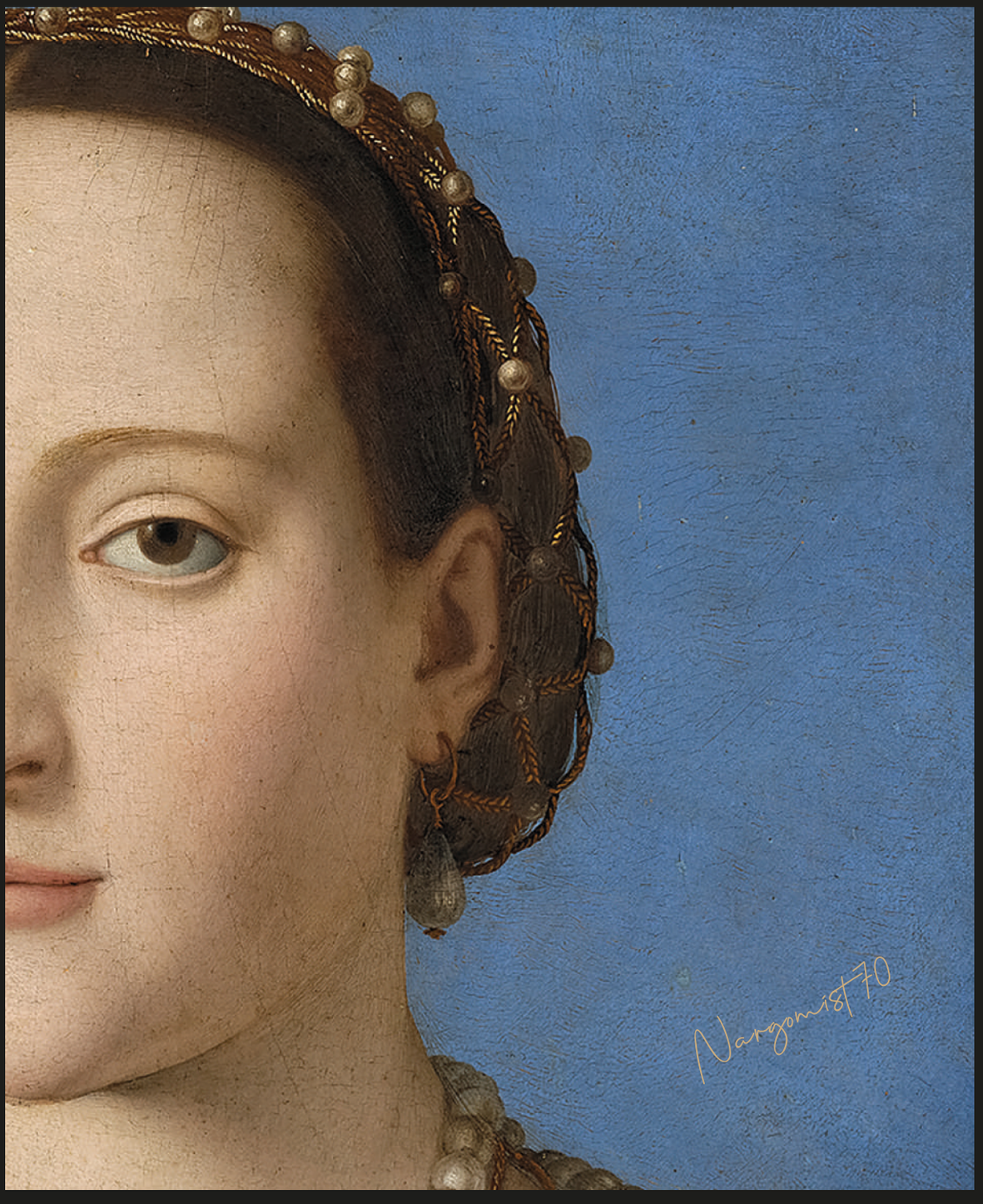
NARGOMIST 70



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NARGOMIST 70

NARGOMIST 70 : ITALIAN INNOVATION FOR FIRE PROTECTION OF CULTURAL HERITAGE

INTRODUCTION

Tema Sistemi SpA, an Italian company specializing in the design and production of fire protection systems since 1990, has always shown a deep commitment to safeguarding cultural heritage.
In fact, as early as 2012, the company began a collaboration with the University of Rome Tor Vergata, with the aim of developing innovative plant technologies capable of significantly improving safety and reduce damage to priceless works in case of fire.
The project enables in-depth analysis of the interactions and tolerances of works of art to moisture, laying the groundwork for future studies.

The research journey continues in 2021, with the birth of SAFENG, a scientific and industrial research project designed to create a fire protection system capable of protecting works of art and any property under protection, while ensuring the safety of humans and of the environment.
Thanks to this project, Tema Sistemi SpA gives birth to Nargomist 70: the first water mist firefighting system designed and tailored for the protection of cultural heritage and priceless works.

“Our country's cultural heritage is universally recognized for its priceless beauties. As an Italian company specializing in the design and production of fire protection systems, we feel the duty, as well as the desire, to put our expertise at the service of the protection of works of art and places that represent the history and identity of the entire community. And, why not, to lead the way for other countries as well.”

Roberto Borraccino

CEO Tema Sistemi SpA

THE PROJECT

SCIENTIFIC AND INDUSTRIAL RESEARCH PROJECT FOR FIRE PROTECTION AND RESILIENCE OF ITALIAN AND EUROPEAN CULTURAL HERITAGE

THE SAFENG | CULTURAL HERITAGE PROJECT WAS BORN FROM THE DESIRE TO PROTECT ITALY'S ARTISTIC AND CULTURAL HERITAGE FROM THE DANGERS OF FIRE, USING MODERN, EFFECTIVE, NON-HARMFUL TO HUMANS, AND ENVIRONMENTALLY FRIENDLY TECHNOLOGIES WITH AN EXCLUSIVE MADE IN ITALY DESIGN.

THE PROJECT AIMS TO RESEARCH AND DEVELOP A NEW SYSTEM:

- Effective in fire protection of irreproducible priceless works such as paintings, tapestries, valuable ancient texts etc.
- That uses extinguishing agents that already exist in nature
- That ensures zero environmental impact

TO CONDUCT THE SAFENG | CULTURAL HERITAGE RESEARCH PROJECT HAVE BEEN STIPULATED: A MEMORANDUM OF UNDERSTANDING BETWEEN:

Firtech The culture of innovation + tema sistemi FIRE TECHNOLOGY

Università degli Studi di Ferrara

AN AGREEMENT BETWEEN:

tema sistemi FIRE TECHNOLOGY

VIGILI DEL FUOCO CORPO NAZIONALE

Università degli Studi di Ferrara

FERRARA FIERE CONGRESSI

SAFENG
PATRIMONIO CULTURALE

FIRTECH +TEMA SISTEMI

FIRTECH (FIRE INDUSTRIAL RESEARCH TECHNOLOGY EUROPEAN CULTURAL HERITAGE) IS AN INNOVATIVE STARTUP THAT AIMS TO RESEARCH INNOVATIVE FIRE PROTECTION SYSTEMS FOR THE PROTECTION OF EUROPEAN CULTURAL HERITAGE. IT WAS BORN FROM A BRANCH OF TEMA SISTEMI SPA A COMPANY PROMOTING THE PROJECT, WHICH HAS SPECIALIZED IN THE DESIGN AND PRODUCTION OF CERTIFIED FIRE PROTECTION SYSTEMS FOR OVER 30 YEARS. TEMA SISTEMI SPA HAS ALWAYS ADOPTED A GREEN PHILOSOPHY: IT IS IN FACT A MEMBER OF GBC ITALIA, A NONPROFIT ASSOCIATION WHOSE MEMBERS INCLUDE THE MOST COMPETITIVE COMPANIES AND THE MOST QUALIFIED ITALIAN ASSOCIATIONS AND PROFESSIONAL COMMUNITIES OPERATING IN THE SUSTAINABLE BUILDING SEGMENT

UNIVERSITY OF FERRARA

PARTICIPATES IN THE PROJECT TO DEVELOP THE STUDY, RESEARCH AND TECHNOLOGY TRANSFER TO THE INDUSTRIAL SYSTEM OF NEW CONTEMPORARY METHODOLOGIES, APPARATUSES, INNOVATIVE MATERIALS FOR THE PROTECTION OF PRICELESS HISTORIC BUILDINGS

NATIONAL FIRE DEPARTMENT

OVERSEES RESEARCH AND ASSEVERATES ITS RESULTS AS A SUPER PARTES BODY. MANAGES THE STANDARDS AND TRAINING SIDE

FERRARA FAIRS AND CONGRESSES

CONTRIBUTES TO THE PROJECT WITH HIS SPECIALIZATION IN THE WORLD OF CULTURAL HERITAGE

THE SAFENG HERITAGE PROJECT REPRESENTS THE CONJUNCTION OF OUR COUNTRY'S ANCIENT HISTORY, STILL APPRECIATED AND STUDIED AROUND THE WORLD, WITH THE MODERN HISTORY OF INNOVATION, TECHNOLOGICAL FERMENT AND THE NEED TO OPERATE WITH RESPECT FOR OUR PLANET.

FOUR ICONIC CITIES CHOSEN TO PROMOTE TECHNOLOGICAL INNOVATION:

SUSTAINABLE DEVELOPMENT GOALS

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IN LINE WITH THE OBJECTIVES OF THE EUROPEAN GREEN DEAL, THE NEXT GENERATION EU AND THE ONU 2030 AGENDA, THE SAFENG | PC PROJECT AIMS TO PURSUE THE FOLLOWING GOALS:

IN COLLABORATION WITH:

Parlamento europeo
Ufficio di collegamento in Italia

assorestauro
associazione italiana per il restauro architettonico, artistico, urbano
italian association for architecture, art and urban restoration

Green Building Council Italia

COMUNE DI TARANTO

DIREZIONE GENERALE SICUREZZA DEL PATRIMONIO CULTURALE DEL MINISTERO DELLA CULTURA

UFFICIO NAZIONALE PER I BENI CULTURALI ECCLESIASTICI DELLA CONFERENZA EPISCOPALE ITALIANA

MEDIA PARTNER:

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CULTURA - POLITICA - ECONOMIA

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THE RESEARCH: OBJECTIVES

- STUDY THE CONTROL AND/OR EXTINGUISHMENT OF FIRES WITH ABSOLUTELY NATURAL 0-IMPACT EXTINGUISHING AGENTS THAT DO NOT CAUSE HARM TO HUMANS OR THE ENVIRONMENT
- THE SYSTEM MUST BE DESIGNED SO AS NOT TO CAUSE DAMAGE TO THE ASSET OF INESTIMABLE VALUE
- THE SYSTEM MUST BE PERFECTLY INTEGRATED INTO THE ENVIRONMENT TO BE PROTECTED FROM A DESIGN POINT OF VIEW BOTH IN TERMS OF COMPONENTS AND INSTALLATION MODE
- THIS RESEARCH SHOWS A PARADIGM SHIFT FROM THE PAST: THE FOCUS IS NO LONGER ON PROTECTING ONLY HUMANS, BUT ON FINDING FIRE PROTECTION SOLUTIONS SUITABLE FOR PROTECTING HUMANS, PROPERTY, AND THE ENVIRONMENT SIMULTANEOUSLY

DETAILS OF SEARCH

1. LITERATURE RESEARCH ON CONSERVATION PARAMETERS, IN RELATION TO FIRE AND EXTINGUISHING AGENTS; ANALYSIS OF SYSTEMS ON THE MARKET
2. SYSTEM SELECTION AND DESIGN OF WATER MIST NOZZLES
3. CHARACTERIZATION OF MATERIALS AND STUDY OF THEIR INTERACTION WITH THE SURROUNDING ENVIRONMENT (REACTION TO FIRE AND EXTINGUISHING AGENT) PRE AND POST TEST
4. FULL-SCALE REPRODUCTION: FIRE AND EXTINGUISHING SYSTEM TESTING
5. THERMOFLUID DYNAMICS SIMULATIONS

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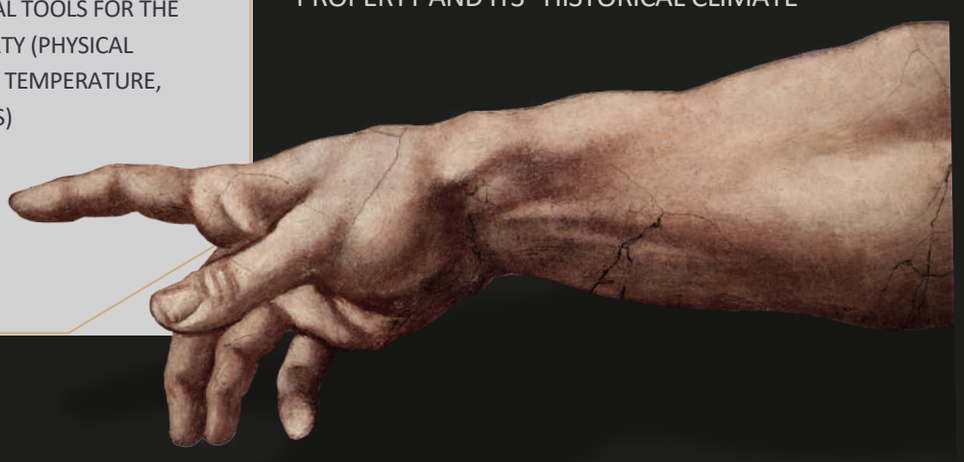
BIBLIOGRAPHIC RESEARCH

CULTURAL HERITAGE CONSISTS OF MOVABLE AND IMMOVABLE PROPERTY, CHARACTERIZED BY DIFFERENT TYPES OF MATERIALS, EACH WITH ITS OWN PHYSICAL AND CHEMICAL CHARACTERISTICS

> STANDARDS AND METHODOLOGICAL TOOLS FOR THE PROTECTION OF CULTURAL PROPERTY (PHYSICAL PARAMETERS: RELATIVE HUMIDITY, TEMPERATURE, WETTING RESISTANCE OF SURFACES)

> DOCUMENTS COLLECTED:
- MIC OFFICIAL WEBSITE
- UNINORMAL PORTAL
- SCIENTIFIC LITERATURE DATA

THE RESULTS SHOWED AN ABSENCE OF SPECIFIC ANALYTICAL STUDIES ON MATERIALS OF CULTURAL INTEREST AFTER FIRE EVENTS, USING SYSTEMS THAT CAN DRASTICALLY CHANGE THE ENVIRONMENTAL CONDITIONS OF THE PROPERTY AND ITS “HISTORICAL CLIMATE”



MAIN TYPES OF ACTIVE FIRE PROTECTION SYSTEMS ON THE MARKET

INERT GAS — ⚠ HUMAN HEALTH — ↑ LARGE SPACES REQUIRED — ↑ HIGH COSTS

CHEMICAL GASES — ⚠ HUMAN HEALTH — ↑ DAMAGE TO WORKS

SPRINKLER — ↑ HIGH AMOUNTS OF WATER USED CAN CAUSE DAMAGE TO WORKS

WATER MIST — ✓ HUMAN HEALTH — ✓ NO DAMAGE TO WORKS — ✓ SUSTAINABLE SYSTEM

WATER MIST NOZZLE DESIGN

> PRELIMINARY STUDY TO IDENTIFY THE OPTIMAL DROPLET DIAMETER SIZE THAT CAN INTERACT, IN THE BEST POSSIBLE WAY, WITH THE SIMULATED FIRE SCENARIO.

> STUDY OF THE DISTRIBUTION OF WATER DELIVERED BY THE NOZZLE WITH CONSEQUENT DETERMINATION OF THE NUMBER, ANGLE OF INCLINATION OF HOLES AND FLOW RATE OF THE SAME, DEPENDING ON:

- SURFACE AND VOLUMETRIC DISCHARGE DENSITIES

- OF THE PROTECTED ENVIRONMENT

PROTOTYPE CONSTRUCTION AND FUNCTIONAL TESTING PHASE:

MEASUREMENT OF PERFORMANCE IN TERMS OF DROPLET FLOW RATE AND DIAMETER, MECHANICAL AND CHEMICAL RESISTANCE FOR OBTAINING THE CERTIFICATION REQUIRED BY INTERNATIONAL STANDARDS.

THE TESTS

TESTS PERFORMED ON PROTOTYPE NOZZLES

DIMENSIONAL: DESIGN COMPLIANCE

TEMPERATURE VERIFICATION: NOMINAL AND OPERATING TEMPERATURE-SENSITIVE ELEMENT AND THERMAL BATH

FLOW RATE VERIFICATION: K FACTOR

WATER DISTRIBUTION: SPACING EVALUATION

FUNCTIONAL: THERMAL TUNNEL FOR THERMAL BULB SENSITIVITY

MECHANICAL STRENGTH: TENSILE AND COMPRESSIVE

HEAT EXPOSURE: NOZZLES IN OVEN FOR 90 DAYS AT 49°C

THERMAL SHOCK EXPOSURE: T CHANGES OF THE BULB

CORROSION: IN AQUEOUS SOLUTION, MAGNESIUM CHLORIDE, SULFUR DIOXIDE, SALT SPRAY

IMMERSION: PLUNGE TEST, RTI DETERMINATION

HUMID AIR EXPOSURE: 95°C AND 98% HUMIDITY FOR 90 DAYS

WATER HAMMER RESISTANCE: 3000 PRESSURE CYCLES 4-200 BAR

DYNAMIC HEATING: CONDUCTIVITY FACTOR

HEAT RESISTANCE: HEAT SHOCK 800°C FOR 15 MIN, THEN WATER AT 15°C

VIBRATION RESISTANCE

SIDE DISCHARGE: CHECK MIN CONDITIONS. SPACING

LEAKAGE RESISTANCE: 30 DAYS AT TWICE THE PRESSURE OP.

VACUUM TEST: VERIFICATION OF SEALS

CLOGGING TEST: FILTER EXPOSED TO CONTAMINATED WATER

WATER PARTICLE SIZE DETERMINATION: AVERAGE DROPLET DIAMETER MEASUREMENT

FULL_SCALE TEST

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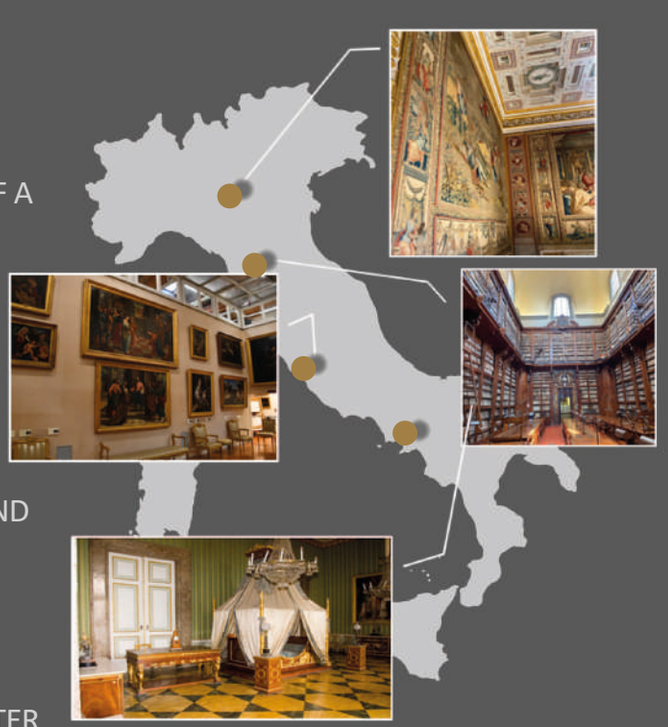
VERIFICATION, WITH FULL-SCALE
REPRODUCTIONS, OF THE APPLICABILITY OF THE SYSTEM FOR FIRE CONTROL IN VALUABLE ENVIRONMENTS AND THE SIMULTANEOUS PROTECTION OF WORKS OF ART.

MOISTURE TEST
AMOUNT OF MOISTURE DEPOSITED ON A COMPOSITE SURFACE FOLLOWING ACTIVATION OF THE WATER MIST SYSTEM

FIRE TESTING
FIRE CONTROL AND EVALUATION OF THE EFFECTIVENESS OF THE SYSTEM FOR THE PRESERVATION OF MATERIALS

REAL CASES



- **MARUCELLIANA LIBRARY, FLORENCE**
  CENTRAL READING ROOM, FOCAL FEATURES OF A HISTORIC LIBRARY (WALL SHELVING AND WOODEN FURNITURE CONTAINING PRINTED MATERIALS, LARGE TABLES ARRANGED IN THE CENTER OF THE STRUCTURE)

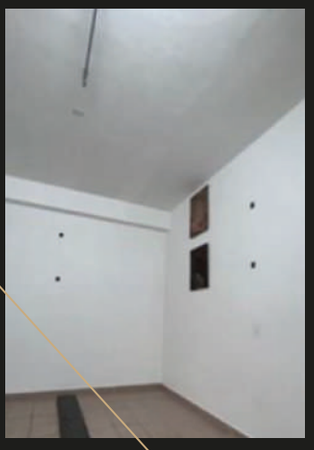
- **DUCAL PALACE, MANTOVA**
  TAPESTRY APARTMENT, TAPESTRIES ON THE WALLS, ACASSETTONI CEILING, REED ROOM, AND WOODEN ATTIC, INTERCAPEDINS

- **PALACE OF CASERTA**
  GIOACCHINO MURAT'S BEDROOM, HISTORICAL FURNITURE ELEMENTS (FOUR-POSTER BED, SILK-COVERED WALLS ON WOODEN FRAME, WOODEN FURNITURE, PAINTINGS)

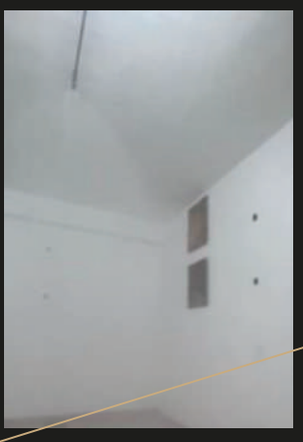
- **BORGHESE GALLERY, ROME**
  DEPOT/PINACOTHEQUE

HUMIDITY TEST

- **SAMPLES PLACED AT TWO DIFFERENT HEIGHTS:**
  - 4 CANVAS
  - 2 PAINTINGS
  - 2 FRAMES



HUMIDITY MEASUREMENT BEFORE AND AFTER THE TEST



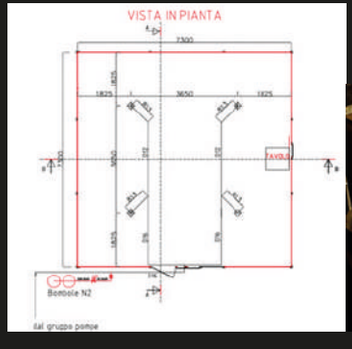
SPECIFIC PARAMETERS EVALUATED THROUGH THE NOZZLE DESIGN STUDY AND THE MEASUREMENT OF MOISTURE VALUE NOT TO DAMAGE THE WORKS
SYSTEM: **NARGOMIST 70**

- CONSISTING OF A PUMPING SYSTEM THAT DELIVERS WATER AT 65 BAR AND A NITROGEN SOURCE THAT ALLOWS ATOMIZATION OF WATER DROPLETS
- INSTALLATION OF A NOZZLE ON THE CEILING
- ACTIVATION OF THE SYSTEM FOR 15 MIN

EXPERIMENTAL SCENARIO BUILT WITHIN A 4.86X3.35X3.90 M ROOM, REPRESENTATIVE OF THE BORGHESE GALLERY'S DEPOT/PICTURE GALLERY WITH PAINTINGS AND CANVASES DONATED BY THE LATTER SPECIFICALLY FOR THE TEST

FIRE TESTING

- **SAMPLES PLACED AT TWO DIFFERENT HEIGHTS:**
  - 3 PAINTINGS ON CANVAS
  - PLYWOOD SUPPORT WITH 2 WOODEN FRAMES



TEST CONDUCTED IN THE PRESENCE OF THE CERTIFYING BODY:

BUREAU VERITAS

FIRE SOURCE:

- TABLE WITH SOLID MATERIALS (WOOD, PLASTIC, PAPER...) AND FLAMMABLE LIQUIDS (SOLVENT, PAINT...) FREE FIRE TEST (FIRE CHARACTERIZATION, T EVOLUTION, DURATION OF COMBUSTION)
- EXTINGUISHING TEST (EVALUATION OF THE SYSTEM)
- HOT FUME TEST (EFFECTIVENESS OF THE SYSTEM IN CONTROLLING AND REDUCING TEMPERATURES IN THE PROTECTED VOLUME INVADED BY HOT FUMES)

MEASUREMENT OF TEMPERATURE, GAS (CO, CO2, O2), RELATIVE HUMIDITY, AND CAMERA OBSERVATIONS

FLUID DYNAMIC TESTING

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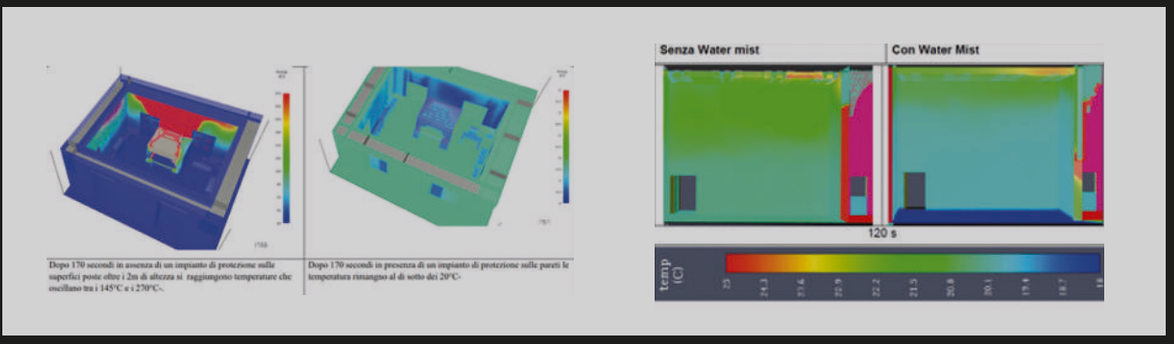


FIRE SIMULATIONS USING FDS SOFTWARE WITH REAL CASE REPRODUCTION

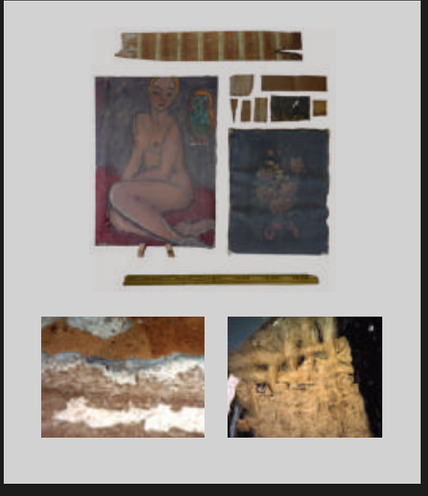
PURPOSE:

- REPLICABILITY IN THE SIMULATED ENVIRONMENT OF FULL-SCALE TEST CONDITIONS AND RESULTS
- TO ALLOW THE EXTENSION OF SIMULATED RESULTS TO CONDITIONS NOT TESTED EXPERIMENTALLY

SIMULATIONS WITH AND WITHOUT WATER MIST SYSTEM ACTIVATION FOR THE STUDY OF:

- SMOKE PROPAGATION
- TEMPERATURE TREND
- EXTINGUISHING TIME
- AMOUNT OF WATER DEPOSITED ON FLOOR AND WALLS

STUDY OF MATERIALS



REPRESENTATIVE SAMPLES PROVIDED BY GALLERIA BORGHESE:

1. WOODEN BOARD PAINTED ON BOTH SIDES
2. FRAGMENTS OF CANVAS
3. CANVAS PAINTED ON WOODEN BOARD
4. CANVAS PAINTED ON BOTH SIDES, WITH WOODEN FRAME
5. FRAGMENTS OF GILDED WOODEN FRAME

- PRELIMINARY ANALYSES TO ASSESS COMPOSITION AND STATE OF PRESERVATION OF SAMPLES
- POST FIRE AND EXTINGUISHING SYSTEM TEST ANALYSES TO ASSESS THE PRESENCE OF CHANGES

STRUCTURE CHARACTERIZATION, TEXTURE AND COMPOSITION BY:

- MACROSCOPIC DESCRIPTION OF MATERIALS AND THEIR STATE OF PRESERVATION
- STEREOMICROSCOPE OBSERVATION
- UV MICROSCOPE OBSERVATION FOR BETTER ASSESSMENT OF THE CONDITION OF MATERIALS
- OBSERVATION AND MICROANALYSIS (ELEMENTAL COMPOSITION) BY SEM-EDS
- PIGMENT IDENTIFICATION BY RAMAN SPECTROSCOPY

RESULTS

THE EXPERIMENTATION CONFIRMS THE EFFECTIVENESS AND EFFICIENCY OF THE **NARGOMIST 70** SYSTEM PLACED TO PROTECT CULTURAL SITES AND EXHIBITS, PROVING TO BE CURRENTLY THE MOST ADVANCED SYSTEM IN FIREFIGHTING RESEARCH IN THIS TYPE OF APPLICATION

LOW OR ABSENT MOISTURE VALUES ON THE ARTIFACTS:

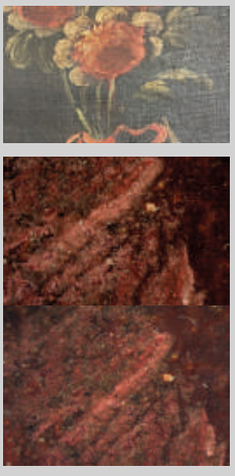
SAMPLES SUBJECTED BEFORE AND AFTER EXPOSURE TO WATER MIST TO MOISTURE MEASUREMENT:

LOW VALUES THAT DO NOT CREATE DAMAGE TO THE WORKS

MACROSCOPIC INSPECTION:

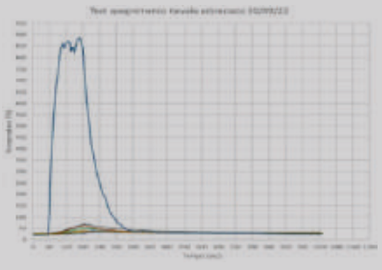
THERE IS NO EVIDENCE OF DAMAGE CAUSED BY THE USE OF THE WATER MIST SYSTEM, ATTRIBUTABLE TO ISSUES SUCH AS DETACHMENT, COLOR LOSS/VARIATION, SWELLING, CRACKING.

THE SAMPLES APPEAR TO BE WELL PRESERVED



MICROSCOPIC COMPARISON
RED BUD PIGMENT PRE AND POST TEST

BORGHESE GALLERY SIMULATION TEST, ROME

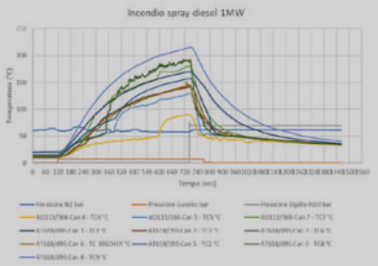


TEMPERATURE TREND RECORDED DURING THE COURSE OF THE TEST

TEMPO [min:s]	AZIONI/OSSERVAZIONI
0:00	Accensione
2:00	Preaccensione
2:03	Attivazione del sistema di spegnimento
6:17	Estinzione
11:30	Chiusura del sistema di spegnimento

RESULT: FIRE EXTINGUISHED IN 4:14 (MM:SS) FROM SYSTEM ACTIVATION

DUCAL PALACE SIMULATION BURNER TEST, MANTOVA



ACTIVATION OF THE SHUTDOWN SYSTEM WHEN THE TEMPERATURE OF THE HOT SMOKE AT THE CEILING HAS REACHED ABOUT 220 °C. SUDDEN COLLAPSE OF TEMPERATURES AND SHUTDOWN, AFTER ABOUT 50 SEC.

RESULT: EFFECTIVE PLANT EVEN IN THE PRESENCE OF HOT FUMES FROM ADJACENT ROOMS.

RESULTS

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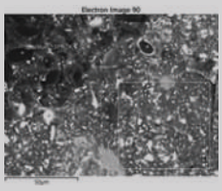
THE RESULTS OF FULL-SCALE TESTS, CONDUCTED IN THE PRESENCE OF THE CERTIFYING BODY BUREAU VERITAS AND ALSO CONFIRMED BY THE FDS TRIAL, DEMONSTRATE THE EFFECTIVENESS AND EFFICIENCY OF THE SYSTEM IN:

- FIRE CONTROL
- TEMPERATURE REDUCTION
- ISOLATION OF COMBUSTION PRODUCTS
- LITTLE WATER USED AND RELEASED

EXTINGUISHING THE FIRE IN TIME TO SAFEGUARD THE WORKS

THE CHARACTERIZATION STUDY OF THE SAMPLES MADE IT POSSIBLE TO DETERMINE THE PRESENCE OF ANY CHANGES DUE TO THE INTERVENTION OF THE WATER MIST SYSTEM

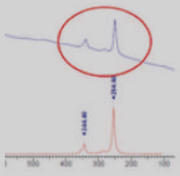
MICROSCOPIC OBSERVATIONS AND ELEMENTAL ANALYSIS BY SEM-EDS SHOW NO CHANGES ATTRIBUTABLE TO FIRE AND EXTINGUISHING SYSTEM



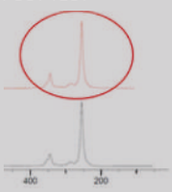
NO TRACES CARBONIZATION NO TRACES EXTINGUISHING AGENT USE

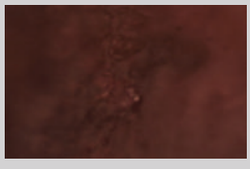
RAMAN OBSERVATIONS OF THE PIGMENTS SHOW NO COLOR CHANGES

PRE TEST



POST TEST





NO COLOR CHANGES

NARGOMIST 70

RESEARCH CONCLUSIONS

- NATURAL, ZERO-IMPACT EXTINGUISHING AGENT THAT IS NOT HARMFUL TO PEOPLE, THE ENVIRONMENT OR WORKS OF ART
- SYSTEM DESIGNED NOT TO CAUSE DAMAGE TO CULTURAL HERITAGE AND TO BE PERFECTLY INTEGRATED INTO THE ENVIRONMENT TO BE PROTECTED
- SUSTAINABILITY: MINIMAL AMOUNTS OF WATER COMPARED TO TRADITIONAL SYSTEMS

NARGOMIST 70 IS THE FIRST WATER MIST SYSTEM DESIGNED FOR CULTURAL HERITAGE FIRE PROTECTION. THE PERFECT BALANCE BETWEEN DROPLET SIZE, NITROGEN INJECTION, FLOW RATE AND OPERATING PRESSURE ENABLE RAPID EXTINGUISHMENT THAT DOES NOT PENETRATE AND LEAVES NO RESIDUE, PRESERVING WORKS AND ENVIRONMENTS OF INESTIMABLE VALUE

THE SYSTEM

NARGOMIST 70

NOZZLES

With their elegant Made in Italy design, NARGOMIST 70 system nozzles are the smallest on the market.
They are designed to blend completely into the high historical value environments for which they are intended.
They are available in pendent and sidewall versions

GN2

The innovative GN2 system is the latest PATENT from Tema Sistemi Spa. It enables water and nitrogen to be expertly mixed, providing a high degree of atomization that makes the water less "wetting."
It is also designed to optimize the storage volume of nitrogen by using its full volume even at balanced pressure.
It is a modular system that is easy to install even in ravamping operations

PUMP UNIT

Electric pumps in the NARGOMIST70 system ensure continuity of system operation and the possibility of multiple operations. It is a compact system, suitable for even the smallest spaces. Safe, reliable and guaranteed for 30 years of operation

NARGOMIST 70

ADVANTAGES

- HIGH ATOMIZATION EFFECT
- REDUCED WETTABILITY
- LOW WATER FLOW RATES
- PERFECT DROPLET SIZE (MEASURED BY PDPA LASER)
- PERFECT BALANCE BETWEEN QUENCHING/PROTECTION PARAMETER

EFFICIENCY

- UNLIMITED INTERVENTION AVAILABILITY
- BREATHABLE AIR DURING DISCHARGE
- 10-YEAR WARRANTY
- EASY TO INSTALL
- SMALL SYSTEM INSTALLABLE EVEN IN THE SMALLEST TECHNICAL COMPARTMENTS
- CAN BE INTEGRATED INTO EXISTING SYSTEMS

DESIGN

- EXCLUSIVE MADE IN ITALY DESIGN
- NOZZLES ARE THE SMALLEST IN THEIR CLASS

SUSTAINABILITY

- USES UP TO 90 PERCENT LESS WATER THAN TRADITIONAL SYSTEMS
- USES NATURAL EXTINGUISHING AGENTS
- DOES NOT CONTAMINATE
- LEAVES NO RESIDUE
- SMALL SIZE, LESS USE OF MATERIALS AND RESOURCES

Protecting Beauty

NARGOMIST 70

tema sistemi®
FIRE TECHNOLOGY

Tema SISTEMI®
FIRE TECHNOLOGY

www.temasistemi.com