

Technology at service of art and art history.

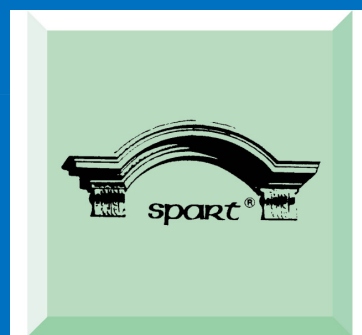
The restoration as global project, with utmost attention for detail.

Service as culture of the company.

Many years of experience on the highest levels.



SYSTEMS



Products, technologies and services for the monumental restoration

STRUCTURAL REINFORCEMENT - SEISMIC RETROFITTING

SPART[®] ECO
PRODUCTS, TECHNOLOGY AND SERVICE, FOR THE RESTORATION OF MONUMENTS - ECOSYSTEMS

reinforced render

- BS 38/39 - 2,5 MuCis[®] sra
- BS 37 FLP LIGHT

ECC-Engineered Cementitious Composites

- HFE-tec[®] Muratura

POINTING AND RECONSTRUCTION OF STONES

by casting (in mould)

(formulation prepared "ad hoc")

- SPARTYTE[®] AR-col: to reproduce sandstone
- SPARTYTE[®] COT-col: to reproduce claybricks or ornaments
- SPARTYTE[®] COT-col: to reproduce limestone or marble

manually (by trowel)

(formulation prepared "ad hoc")

- SPARTYTE[®] AR-rap: To reproduce sandstone
- SPARTYTE[®] MAR-grip: To reproduce limestone or marble (white-ivory base - coloured with pigments)

CONSOLIDATION OF RENDERS, MASONRY, BRICKS

injection by syringing

("ad hoc" preparation)

- INZ-ARC dense binder. cracks > 0,2 mm
- SPR 19 against exfoliation

impregnation

("ad hoc" preparation)

- ADHEWAT impregnation - consolidation of renders
- SILAKTIV consolidation porous stones, based on esters/silicate
- TECNOSOLID 82 reversible methacrylate
- TECNOSOLID 82/WP methacrylate + siloxane (also water-repellent)
- TECNOSYLKE SF1 silicating polymer in water

Reaggregation of masonry by injection

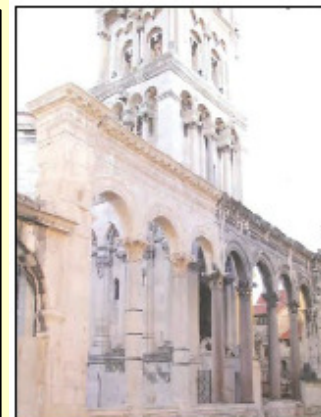
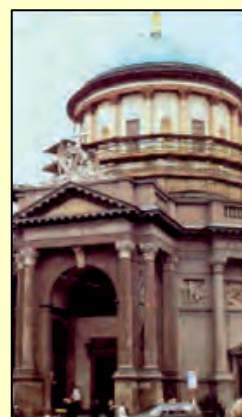
- LIME INJECTION based on lime and active silica

SEALING RENDERING

- ASPER[®] RINZAFFO white
- ASPER[®] INTONACO white
- ASPER[®] COCCIOPESTO red/orange
- ASPER FORMULATIONS made "ad-hoc"
- INTONACHINO STORICO slaked lime based. Colours A= light B=medium C = strong

FINISH AND PROTECTION

- RASTUCCO RASATURA
- SILPAINTE silicate paint
- VELART solvent based coloured veiling product by absorption
- WP-55 siloxane water repellent for concrete, render, brick, stone facades





“COLLEONI” CHAPEL, in BERGAMO CITTA’ ALTA: restored years 1988-1990

*Consolidation, sealing and integration of various stones * (marble, sandstone, porfiry etc.)*

N. 31 formulations made “ad hoc”:

SILAKTIV (N° 1) – SPARTYTE® MAR-GRIP (N° 15) - SPARTYTE® AR-RAP (N° 6) - SPARTYTE® AR-COL (N° 3)

Coatings with ancient renders, protective treatment.

*INTONACHINO STORICO (N°6) – IMPERMEABILIZZANTE WP 55 – TECNOSOLID 82

Formulations SPARTYTE® “ad hoc” for sealing, integration and repair on following natural stones:

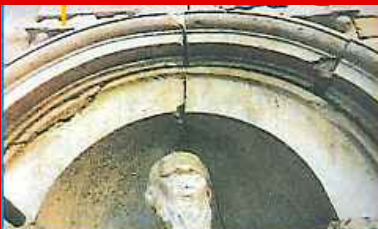
*WHITE LIMESTONE FROM VERONA (“Biomicrite”) - *RED FROM VERONA (“Biomicrite”) - *STONE FROM ARCO (limestone-“Intra-biosparite”)-*RED ENTRATICO (limestone –“Micrite”) - *STONE FROM SALTIRIO (Limestone – “Intrasparite”) * ZANDOBBIO MARBLE (recrystallized marble) - *BARDIGLIO APUANO (“crystalline limestone- Marble) - *WHITE APUANO (“crystalline limestone- Marble) - *BLACK LIMESTONE (“micrite”) - *STONE FROM NEMBRO (limestone-“micrite”) - *LIMESTONE MAIOLICA (limestone-“micrite”) - *MARBLE FROM CANDOGLIA (“crystalline limestone”)- *PIETRA SIMONA (“quartz-sandstone”) - *BOTTICINO (limestone - “micrite”) - *SANDSTONE SARNICO (“lithic sandstone”) - *MARBLE from MUSSO (“crystalline limestone”) - *PORFIROIDE (“gneiss”)



Faithful reproduction by moulding, of the Madonna with the Child in the lantern on the top:
SPARTYTE® AR-COL “ad hoc”



Coating with ancient render, protective treatment : INTONACHINO STORICO – IMPERM. WP55 – TECNOSOLID 82



S. PAOLO of ARGON XVI CENTURY – BERGAMO

Cleaning, reconstruction and sealing of marble Zandobbio with final protective treatments.

Products used: INTONACHINO STORICO (1 formulation), SPARTYTE® MAR-GRIP (3 formulations, 5 colours), IMPERMEABILIZZANTE WP 55

CHURCH OF THE HOLY CROSS – LECCE

Injection in LECCE STONE ornaments with SANSYL INIEZIONE MONO, injections to arrest capillary rising of humidity along the internal perimeter at basis of altars, columns etc.

Products used: ADHEWAT®-RM, SPARTYTE® MAR-GRIP “ad hoc”

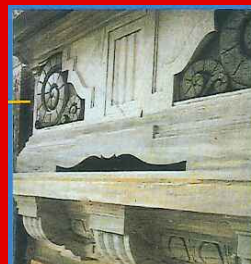


“PALAZZO BREMBATI” – BERGAMO

Slaked lime based rendering putty, in colour. Balustrade with balusters, artificial stone reconstructions (products that reproduce the fundamental physico-chemical and mechanical properties of the natural stone) with faithful casts of existing vintage artefacts. Restoration of statues in “gentle strain.”

Products used:

INTONACHINO STORICO (4 formulations)
SPARTYTE® AR-COL (2 formulations)
SPARTYTE® AR-RAP (3 formulations)
SPARTYTE® MAR-GRIP (2 formulations)
IMPERMEABILIZZANTE WP 55
TECNOSOLID 82



ANCIENT PALAZZO – MILAN

Cleaning, aesthetic-decorative structural repairs and re-shaping on “cipolin marble”, in severe state of degradation.

Products used:

SPARTYTE® MAR-GRIP (5 formulations with different chromatic effects)
VELART (4 formulations)
IMPERMEABILIZZANTE WP 55



SANTA MARIA DELLE GRAZIE - BERGAMO

Restoration with partial reconstruction and sealing, protective treatment on the columns in sandstone.

Products used:

SPARTYTE® AR-RAP (3 formulations)
 SPARTYTE® AR-COL (2 formulations)
 VELART (veiling effect, 3 formulations)
 IMPERMEABILIZZANTE WP 55
 TECNOSOLID 82
 Painting with silicate technology



RESTORATION OF STONES of MC KENZIE CASTLE (GE)

Products used:

SILAKTIV-TECNOSOLID 82/WP-
 SPARTYTE® AR RAP – ADHEWAT® -
 SPARTYTE® AR COL



Castle in the historical center of Naples:
 Stratigraphy of the plinth
 Micro-picture of the section

NAPLES: ZEVALLOS STIGLIANO BUILDING (Toledo street) Main Office INTESA BANK Campania

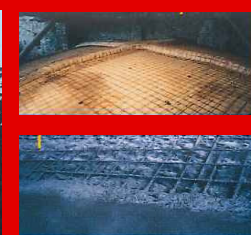
Restoration of all external and internal facades and of the roof .



CHURCH 'CHIESA DI S. CASCIANO' IN MODIGLIANO (FAENZA)

Strengthening of the brickwork vault composite materials- carbon fibre .
 Static consolidation and restoration of the brickwork vaults .

Products used: RINZAFFO cycle ASPER® - Tecnoepo IN 03 - BS 38
 MuCis® BIC – Tecnoepo 700 – Tecnofib AC170 or Tecnofib C240 –
 Tecnoepo 701- RASTUCCO RASATURA



CHURCH OF ALMENNO S.B. (BERGAMO)

Structural consolidation of the vaults with reinforced renders. Products used: BS 38 MuCis®

RESTORATION CAMPANARIA TOWER OF THE CATHEDRAL 'SAN LORENZO' in LUGANO, CANTON TICINO

The significant deterioration of some elements was mainly due to the phenomena of: exfoliation (separation of subparallel surface layers, often preceded by swelling), spalling (total or partial separation of parts of material of irregular shape and thickness), microcarst (tiny crater accompanied by spontaneous falling powder and granules due to erosion processes by chemical corrosion caused by water). The intervention consisted in the consolidation of stone and the integration of gaps, which could facilitate the penetration or runoff of water along the facades.

Products used: SPARTYTE® MAR GRIP – ADHEWAT® – VELART - TECNOSOLID 82/WP - IMPERMEABILIZZANTE WP 55



POSTE OFFICE REGGIO CALABRIA BUILDING

Conservative restoration of the rendering: areas detaching for the wall; injection for bonding :
 SPR 19, LIME INJECTION

Conservative restoration of the rendering: consolidating impregnation SILPAINT FIX

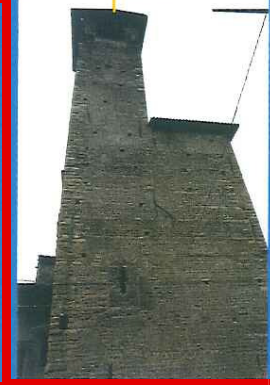
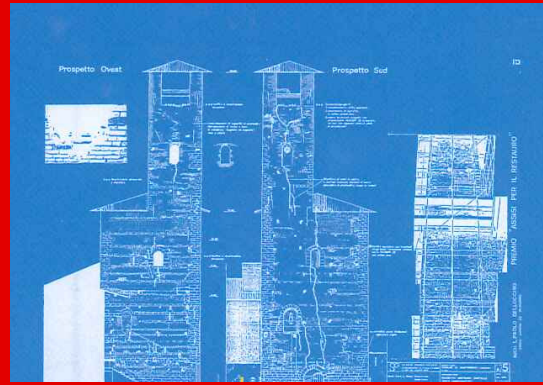
Protective treatment of the steel reinforcement and restoration of the completely degraded renders which need to be re-applied completely or partially:

MuCis® PROTEZIONE FERRO, MuCis® mia 200 and cycle ASPER®

Protective covering on architectonic elements particularly exposed to rainwater: ELASPLAST 25 MuCis®

Restoration of completely degraded renders of which the substrate is affected by rising humidity and/or high concentrations of harmful salts :
 cycle MACROPORE®

Painting with transpiring silicate paint in colours: SILPAINT



BASILICA S. MARIA IN COLLEMAGGIO, L'AQUILA

Consolidating injection in the wall structure of the main facade:
LIME INJECTION 9000.

Consolidation of masonry structure with grout injections based on hydraulic binder, low elastic modulus, perfectly compatible with the original stone and mortars. In particular the intervention aimed at filling possible gaps at the interface between the internal wall structure and stone exterior parameter.

All holes were performed in the inner wall of the Church. The mesh of the holes is pushed until it reached the interface internal masonry / external walls (about 100-120 cm depth). A hole every square meter, reinforced was pushed till a few centimeters of the external parameter.

The injected facade (thus deducting the rosettes and portals) measured a total of approximately 500 m².

The facade has withstood the 2009 earthquake!

CONSERVATIVE AND CONSOLIDATING RESTORATION OF THE TOWER OF "CASTELLO DI MARTINENGO (BG)"

Products used:

LIME INJECTION - BS 91 ANCORA A.R.C MuCis® - RAPIDO GRIP 613 - TECNOEPO R - TECNOEPO IN 03 - SILAKTIV - SPR 60 - MuCis® PROTEZIONE FERRO - SPARTYTE® AR RAP or MAR GRIP - BS 38 MuCis® Two-component - ASPER® - INTONACHINO STORICO - IMPERMEABILIZZANTE WP-55 (1st layer) - TECNOSOLID-82 (2nd layer).



SAINT PETER SQUARE - ROME

Restoration of the Bernini column and Consolidation and decorative repair of the statues.
Works initiated years 2011-2012 and ongoing still in 2013.
Products and technology SPART®.

ROMAN ARENA of ' POLA' (Croatia) (II - IV century after Christ)

Restoration initiated in 2007; still ongoing .
Products and technology SPART®.



TEMPLE OF THE ROMAN EMPEROR DIOCLEZIANO (III century after Christ), Spalato (Croatia)

Restoration and consolidation initiated in 2005 (still in progress).
Products and technologies SPART®.

Requests for information and/or Assistance :

U.A.P.P. – Ufficio Assistenza Promozione Progettuale - e-mail : uapp@tecnochem.it

