

EUREKA PROJECT E!400 - EUROCARE GRANITE-STONE

1. General description

Project	E! 400 - EUROCARE GRANITE-STONE	Status	Finished - 22-JUL-1993
Title	Technical Treatment And Conservation Of Granite Stone In A Continental Climate		
Class	Sub-Umbrella	Technological area	Environment
Start date	01-SEP-1988	End date	01-SEP-1990
Duration	24 months	Total cost	1 Meuro
Partner sought	No		
Summary	Selection Of The Best Treatment Products For The Conservation In A Continental Climate Of Monumental Stones Of Granitic Complexion		

Budget and duration

Phase	Budget(Meuro)	Duration (Months)
Definition phase	0	2
Full Exploitation	0	10
Implementation phase	0	12
Total	1	24

Member contribution

Member	Contribution	Position	Since
Spain	85.00%	Notified Finished	22-JUL-1993
Italy	15.00%	Notified Finished	22-JUL-1993

Participants

Company	Country	Type	Role
Agroman Empresa Constructora S.A.	Spain	Large company	Main
Uo - Departamento De Geologia (Dg)	Spain	University	Partner
Universidad De Oviedo			
Istituto Centrale Per Il Restauro	Italy	Governm./Nat. Admin.	Partner

2. Project outline

Project description

The study conducted on the diagnosis of abrasions and general conditions relating to its conservation, contain the following sections:

- * Historical referncation and the location of the quarry from which the rock was extracted
- * Petrological Analysis - Volumetrical percentages of the rock
- * Physical properties:
 - Water absorption
 - Water distortion
 - Capillary absorption
- * General alteration processes of the rock
 - Chemical processes
 - Physical processes
 - Abrasions
 - Fissures
 - Scaling off
 - Patinas
 - Ashlar stone
- * Study of altered material:
 - Diffractometric analysis
 - Morphological analysis
- * Conservation of the rock:
 - Cleaning
 - Consolidation
 - Surface protection
- * Laboratory trials of treatment, preparation and application products:
 - Freezing-Defreezing
 - Salt crystallization
 - Exposure to ultraviolet light
- * Conclusions and treatment suggestions:
 - Weight gain of the treated rocks
 - Post-durability trials
 - Colour variation measures.

Technological development envisaged

Investigation, selection and application method of treatment products best qualified for the conservation.

Markets application and exploitation

Restoration of stones of historical and architectural monuments in the E.U. and Latin America.
By National Heritage, in order to improve conservation.
By construction and restoration companies.
By investigation centres.

Project codes

BSI
DE

thermochemistry

BSI

EDG.EB
RXH
RXH.D
VC/VF
VP
ZO
ZV/ZY

granite
construction materials
stone
chemical technology processes
cleaning agents and polishes technology
history
culture

NACE

2670
2681
26822

4521

Cutting, shaping and finishing of stone
Production of abrasive products
Manufacture of other non-metallic mineral products not
elsewhere classified
General construction of buildings and civil engineering works

3. Main participant

Company **Agroman Empresa Constructora S.A.**
Raimundo Fernandez Villaverde, 43
28003 Madrid
Spain

Tel +34 91 253 5800
Fax +34 91 233 4761

Contact **Mr. Julien Pleite Martin**
Civil Engineer

Tel +34 91 253 5800
Fax +34 91 233 4761

Organisation type Large company
Participant role Main

Contribution to project

Will assume 50% of the project.

Expertise

4. Partner

Company **Uo - Departamento De Geologia (Dg) Universidad De Oviedo**
(Not Available),
33000 Oviedo
Spain

Tel +34 985 103 000
Fax +34 985 233 911

Contact **Prof. Rosa Esbert**

Tel
Fax

Organisation type University
Participant role Partner

Contribution to project

Will start up a laboratory and install the necessary equipment for a total value of 350 million pesetas.

Expertise

The scientific equipment that is being developed at OVIEDO UNIVERSITY is the most specialised in SPAIN for the investigation of stones pathology. On an international level are the following professors: - Dona Rosa Maria Esbar - Don Modesto Montoto.

4. Partner

Company **Istituto Centrale Per Il Restauro**
Piazza San Francesco Di Paola, 9
00 184 Roma
Italy

Tel +39 06 48 869 61
Fax +39 06 48 15 704

Contact **Dr. Marisa Tabasso**

Tel +39 06 48 27 142
Fax +39 06 48 15 704

Organisation type Governm./Nat. Admin.
Participant role Partner

Contribution to project

Expertise