



NATURAL CEMENT

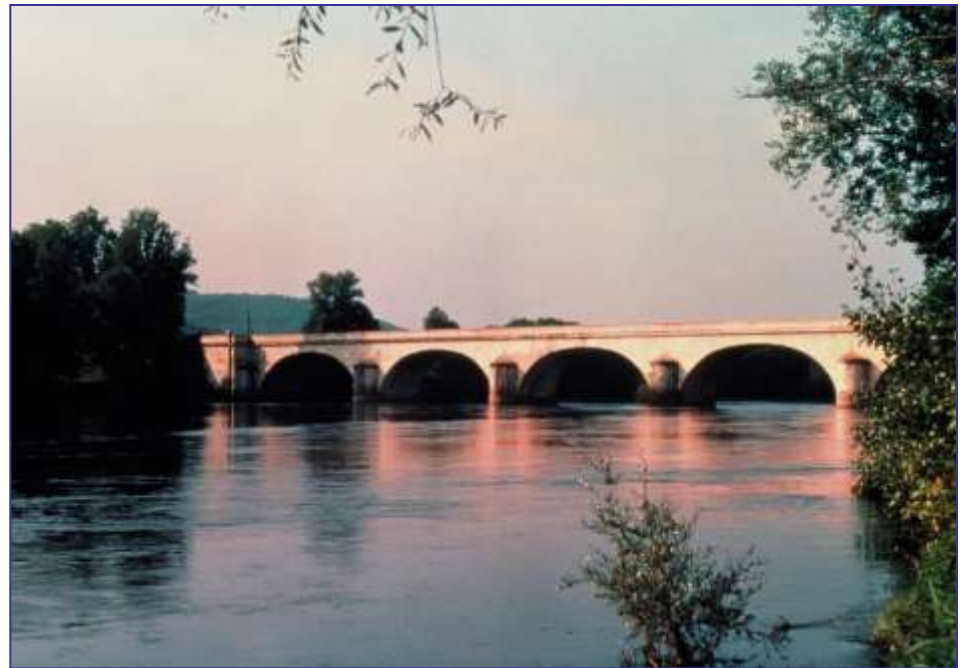
LE PROMPT VICAT

28/11/2008



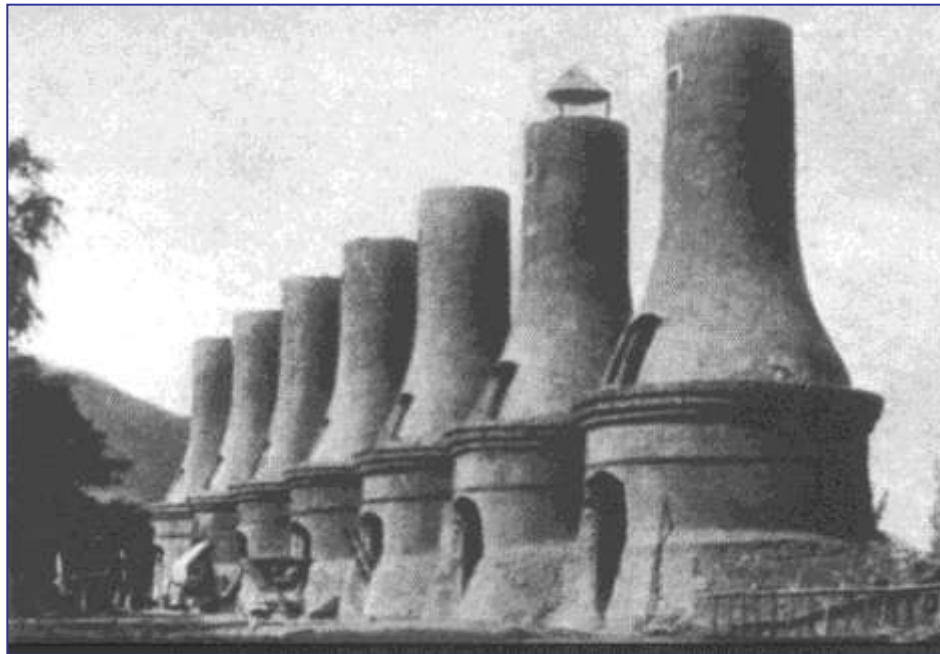
VICAT GROUP

- ▼ Originally, a scientific discovery
- ▼ In 1817, Louis Vicat invents the artificial cement during the construction of the bridge of Souillac



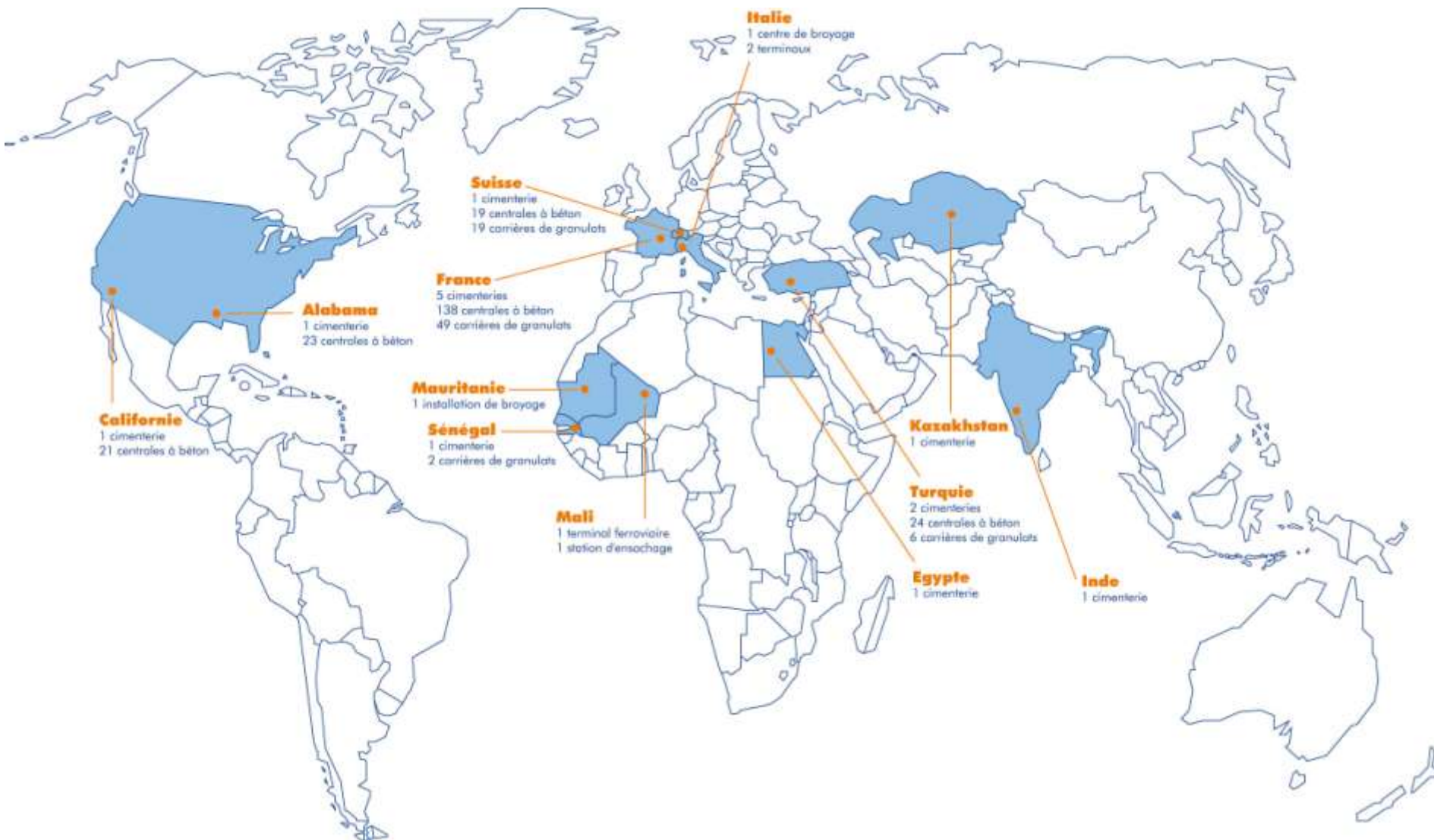
VICAT GROUP

- ▼ In 1853, his son, Joseph Vicat creates the first Portland cement plant of the group Vicat at Genevrey-de-Vif in Isère department.
 - ▼ The vertical kiln called « bottle-feed » of Genevrey-de-Vif plant.



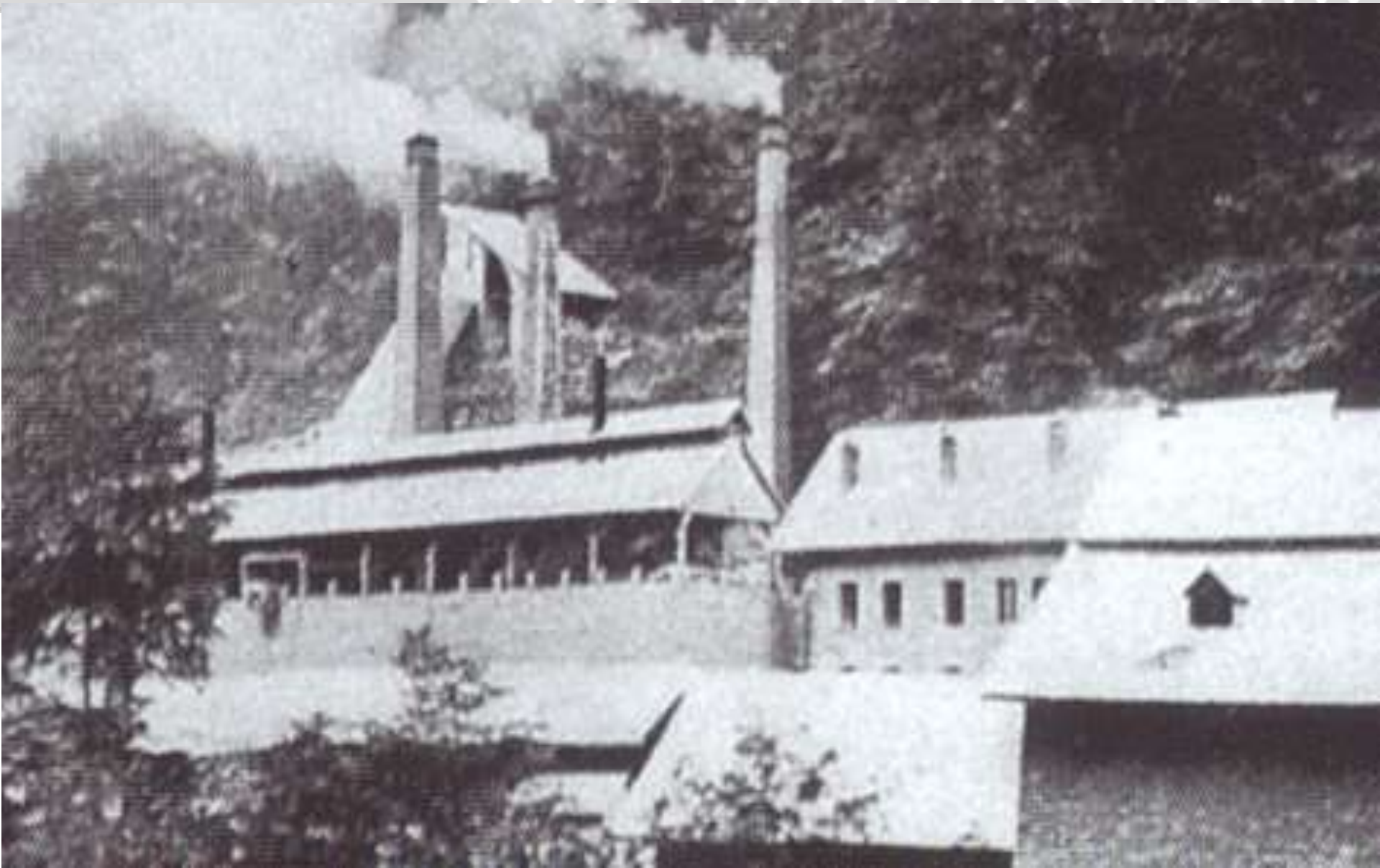
- ▼ From 1853 to the present day, 7 generations of managers have built the Vicat group, today the third French cement producer

VICAT IS NOW AN INTERNATIONAL GROUP WORKING IN 11 COUNTRIES



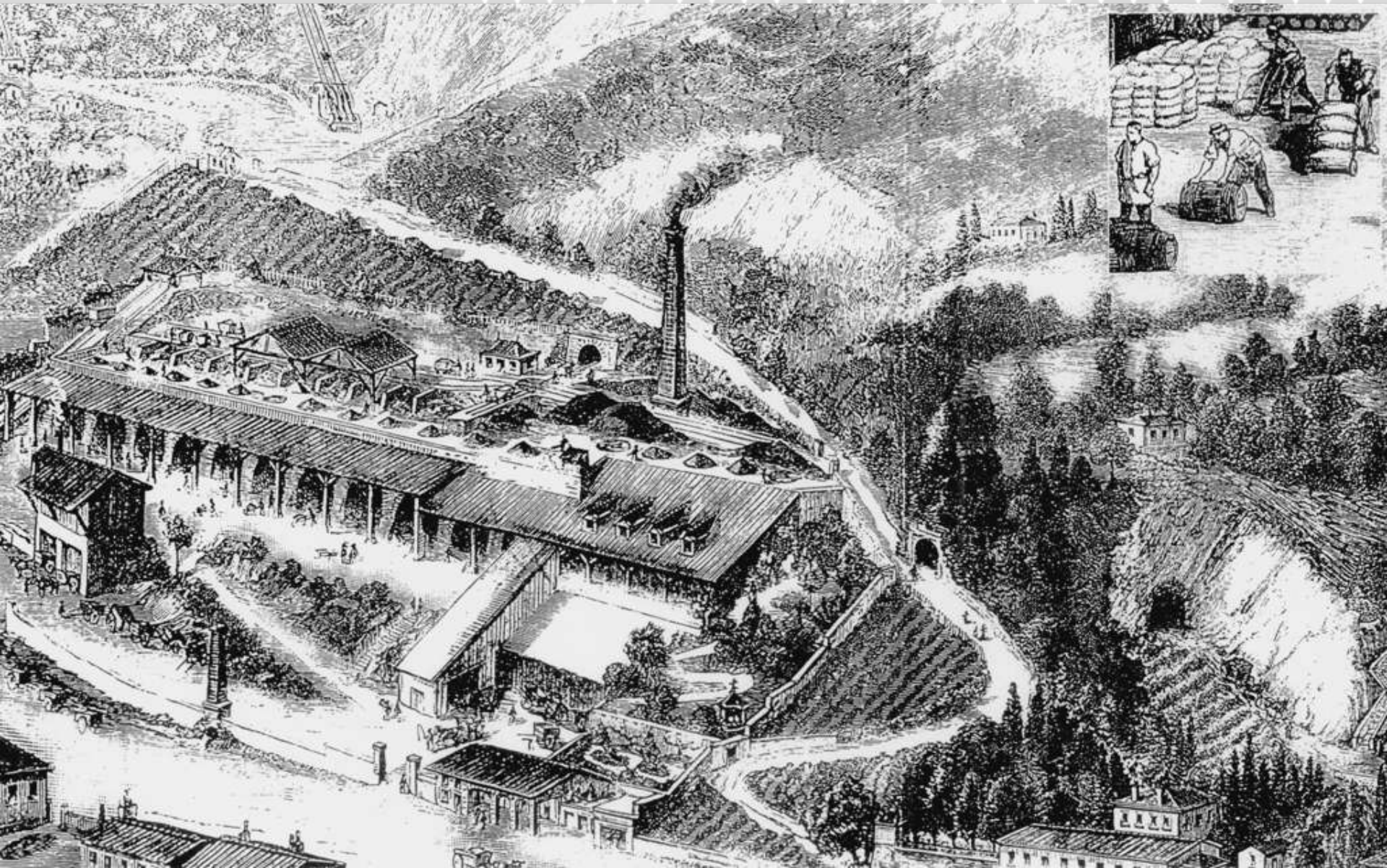
VICAT NATURAL CEMENT

the oldest plant of Vicat La Pérelle 1875



VICAT NATURAL CEMENT

the first plant Porte de France 1842



VICAT NATURAL CEMENT

- ▼ At the present time we produce the natural cement with the same stone from the same geological seam in “Chartreuse” mountain exploited for more than 150 years



VICAT NATURAL CEMENT

- ▼ At the present time we produce the natural cement in two plants and two underground quarries

La Pérelle



Saint-Egrève



VICAT NATURAL CEMENT

- ▼ At the present time we produce the natural cement with the same traditional process of vertical kiln than in 19th century

La Pérelle plant



La usine de la Pérelle 2006



VICAT NATURAL CEMENT

- ▼ At the present time we produce the natural cement with the same traditional process of vertical kiln than in 19th century

La Pérelle plant

About 1900



2006



VICAT NATURAL CEMENT

▼ Extraction of the raw material in an underground quarry



VICAT NATURAL CEMENT

- ▼ A burning with a large spectrum of temperature



VICAT NATURAL CEMENT

- ▼ A simple grinding without addition



VICAT NATURAL CEMENT

- ▼ A part of electricity of La Pérelle plant is supplied by local hydroelectric energy



VICAT NATURAL CEMENT

▼ The Vicat natural cement complies

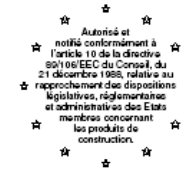
with two French standards

▼ NF P15-314 defines the specifications for Prompt Natural Cement

▼ NF P15-317 defines the cements allowed for work at the sea

▼ The Vicat natural cement complies with European Technical Approval for the CE mark

Centre Scientifique et
Technique du Bâtiment
84 avenue Jean Jaurès - Champs s/ Marne
77447 Marné-la-Vallée Cedex 2
Tél. : (33) 1 64 68 82 82
Fax : (33) 1 60 05 70 37



CSTB
le futur en construction
MEMBRE DE L'EOTA

European Technical Approval ETA-07/0019

(English translation prepared by CSTB, the original version is in French language)

Noms commerciaux:
Trade names:

CIMENT NATUREL PROMPT
FIX-ZEMENT
LE PROMPT VICAT
CIMENT PROMPT VOREPPE
PROMPT PORTE DE FRANCE GRENOBLE
PROMPT VICAT L'UNIQUE

Titulaire :
Holder of approval:

Vicat
France

Type générique et utilisation prévue du
produit de construction :
Generic type and use of
construction product:

Ciment à prise rapide
Rapid setting cement

Validité du :
au :
Validity from / to:

09/03/2007
09/03/2012

Usine de fabrication :
Manufacturing plant:

Société VICAT
Division ciment
BP 36, 4 rue Aristide Bergès
38 081 L'Isle d'Abeau Cedex
France

Le présent Agrément technique européen
contient :
This European Technical Approval
contains:

10 pages
10 pages

VICAT NATURAL CEMENT

- ▼ We produce more than 100 000 tons per year shipped mainly in Europe



VICAT NATURAL CEMENT REFERENCES

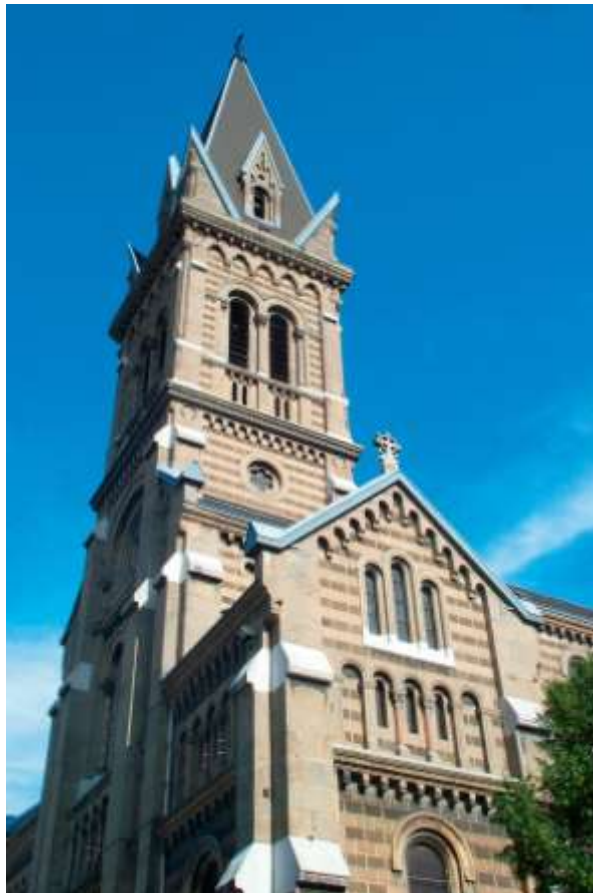
▼ Casamaures 1852 Grenoble

Casamaures 1852 Grenoble France



VICAT NATURAL CEMENT REFERENCES

▼ Saint Bruno church Grenoble (38)



VICAT NATURAL CEMENT REFERENCES

▼ Yzeaux church details



VICAT NATURAL CEMENT REFERENCES



Moirans church

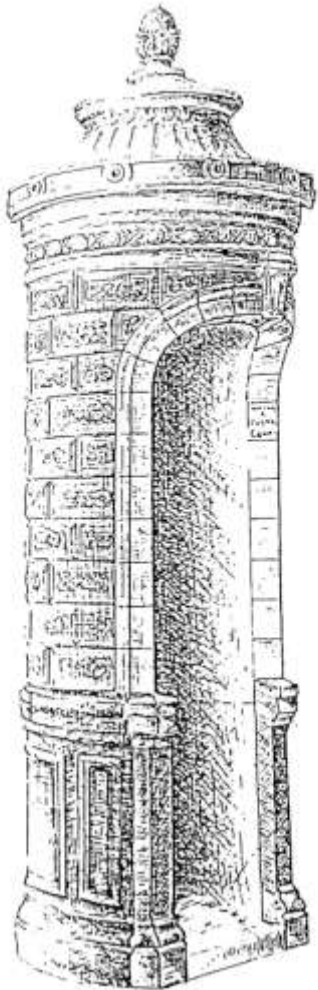


Voiron church details



VICAT NATURAL CEMENT REFERENCES

▼ Urban toilet in Grenoble



BUT WHAT IS A NATURAL CEMENT ?

▼ Some definitions

- ▼ **Natural**: a binder produced from marl or limestone containing clay, one source material rather than being blended from different sources; it is a **natural** combination of limestone and clay
- ▼ This cement was called **Roman cement** in the north of river Loire in France and every where in Europe, and **Prompt cement** in the south of France
- ▼ **Roman**: a derivation of the name of the ancient Roman lime and pozzolana blends invented by the first English producers
- ▼ **Process** : the same than natural hydraulic lime, burnt in vertical shaft but without slaking just grinding

▼ Main characteristics

- ▼ **Rapid setting** ≈15 min
- ▼ Warm yellow to brown **colour**
- ▼ Minimal **shrinkage**
- ▼ **Rapid hardening** then relatively slow

A SAME PRODUCT WITH A DIFFERENT DESIGNATION



A SAME PRODUCT WITH A DIFFERENT DESIGNATION

A VENDRE PAR ADJUDICATION
EN DEUX LOTS
En l'étude de M. GUENEAU, notaire à Lille,
Le Samedi 23 Septembre 1876, à midi,
DEUX USINES
à Ciment Romain

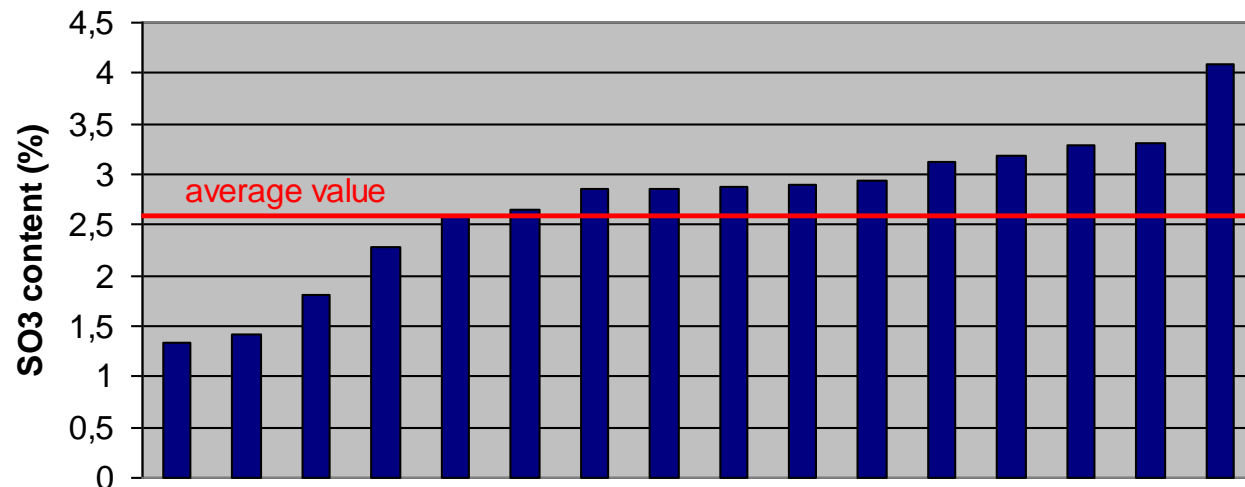
CIMENT PROMPT



VASSY

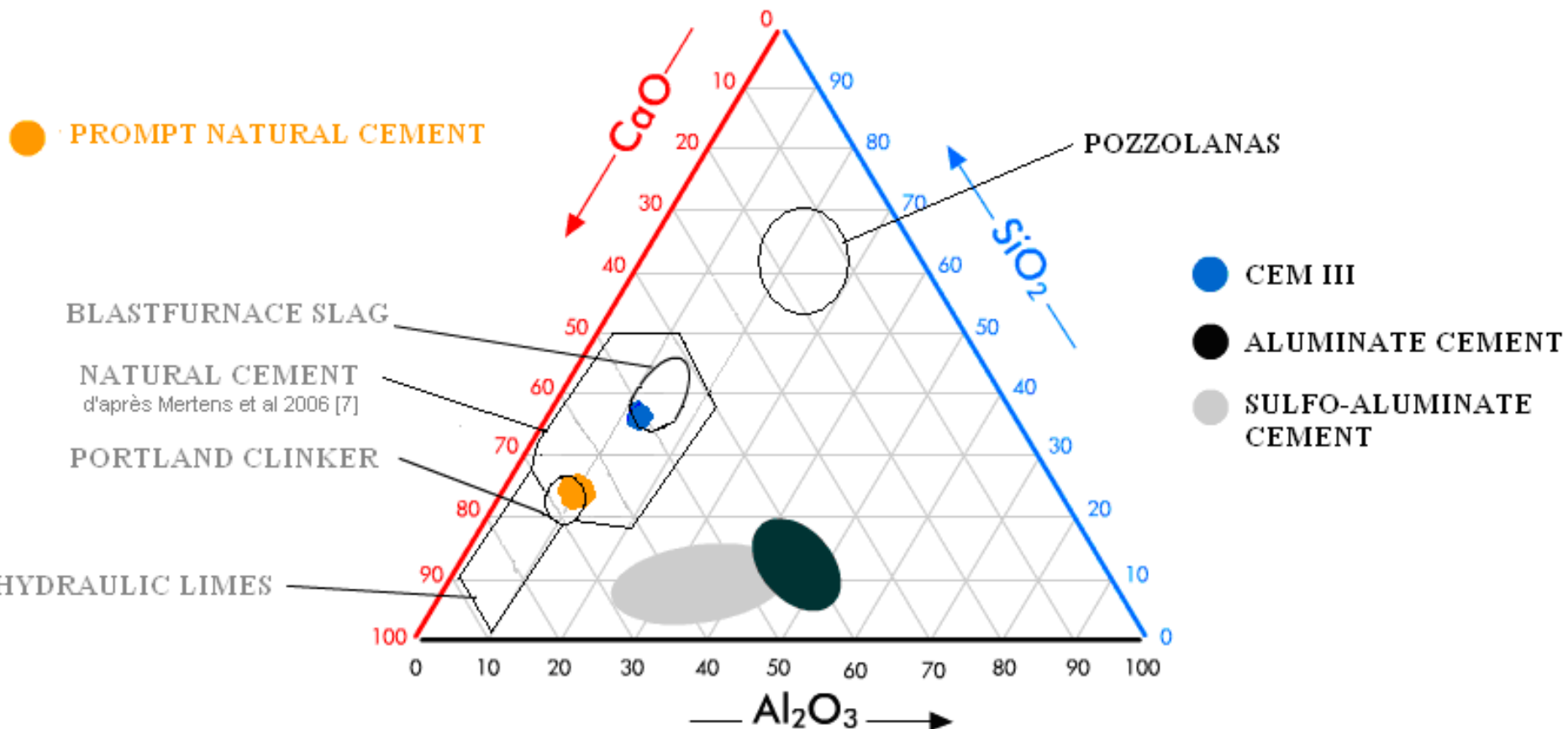
admis à la Ville de Paris

SO₃ content of 17 types of Vassy and Pouilly natural cements



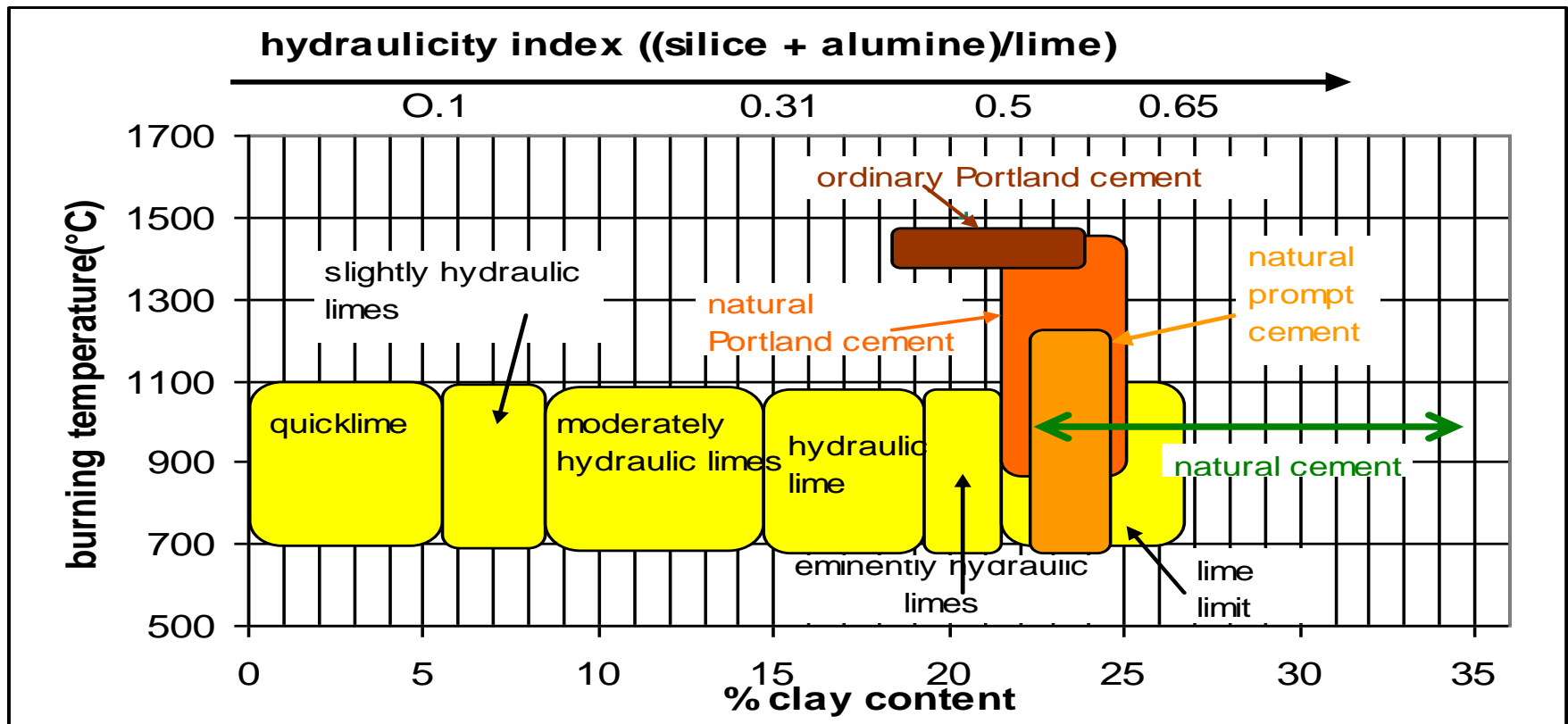
VICAT NATURAL CEMENT

- ▼ A chemical composition close to the Natural Hydraulic Lime and Portland cement



VICAT NATURAL CEMENT

▼ Louis VICAT Classification



VICAT NATURAL CEMENT

- ▼ The traditional process of burning in vertical shaft at low temperature allows to obtain a specific mineralogy

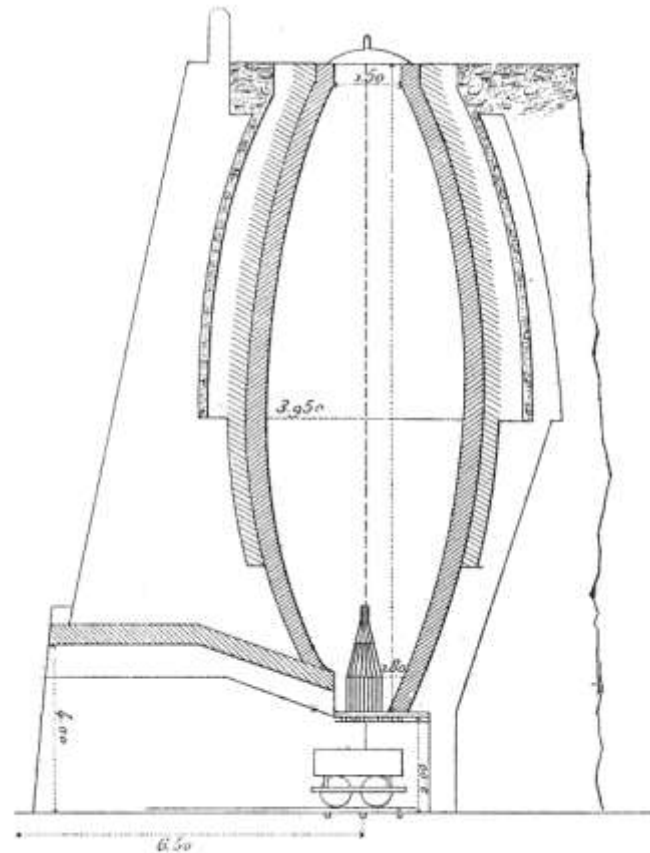
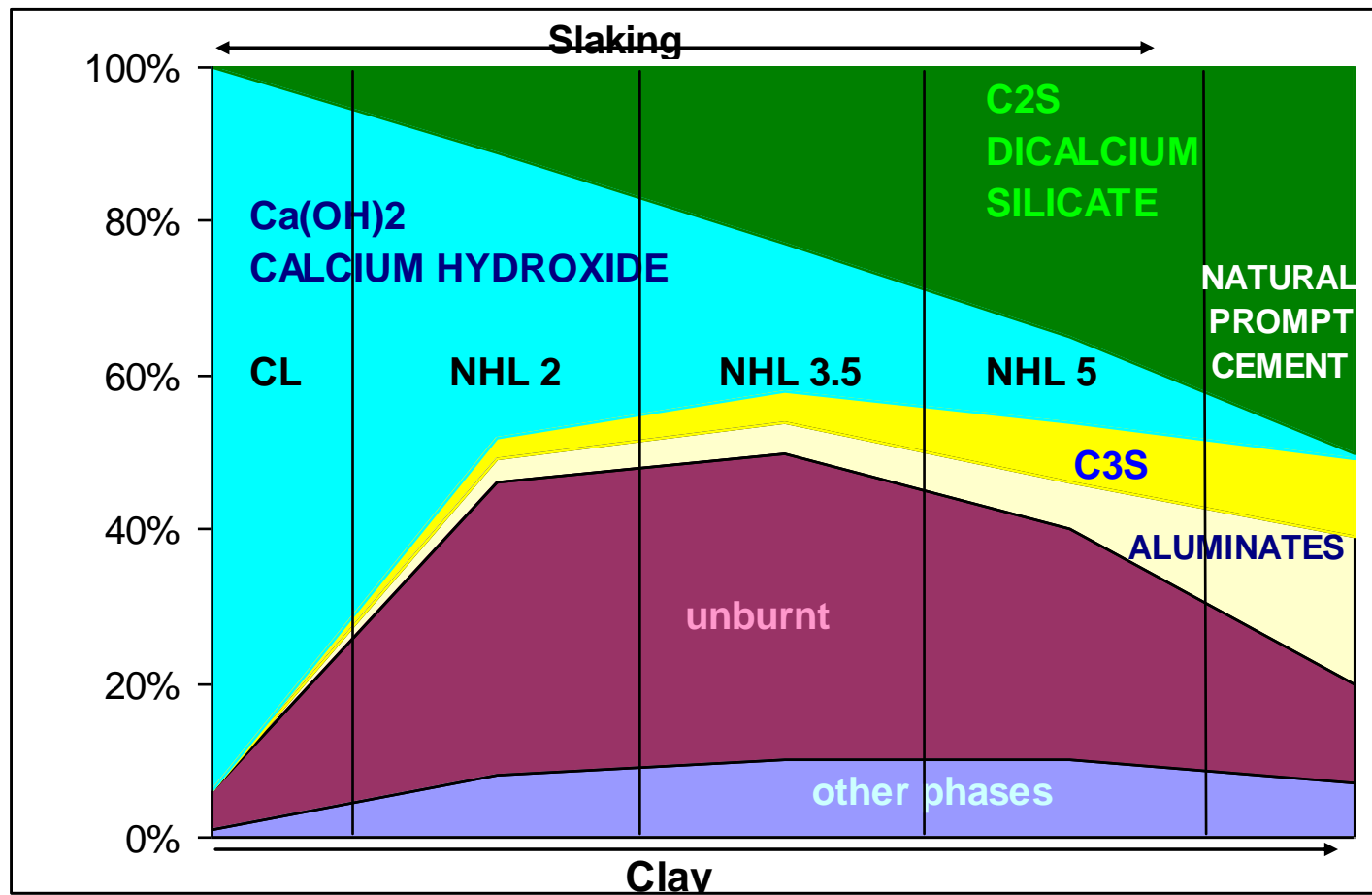


Fig. 1.

VICAT NATURAL CEMENT

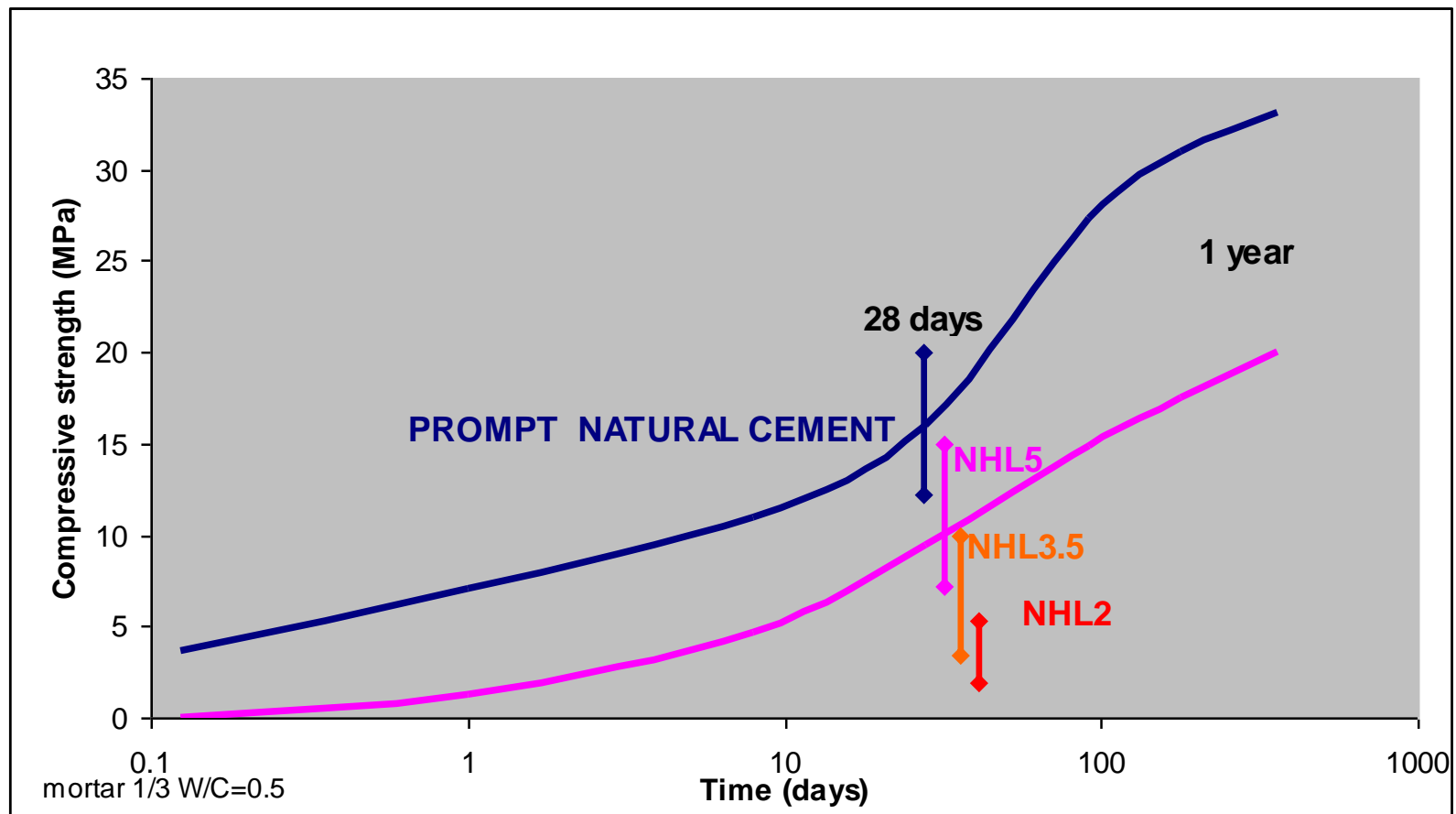
▼ Mineralogical composition

The same minerals than these of hydraulic lime but in different proportion



VICAT NATURAL CEMENT

▼ Rise in parallel strength



VICAT NATURAL CEMENT

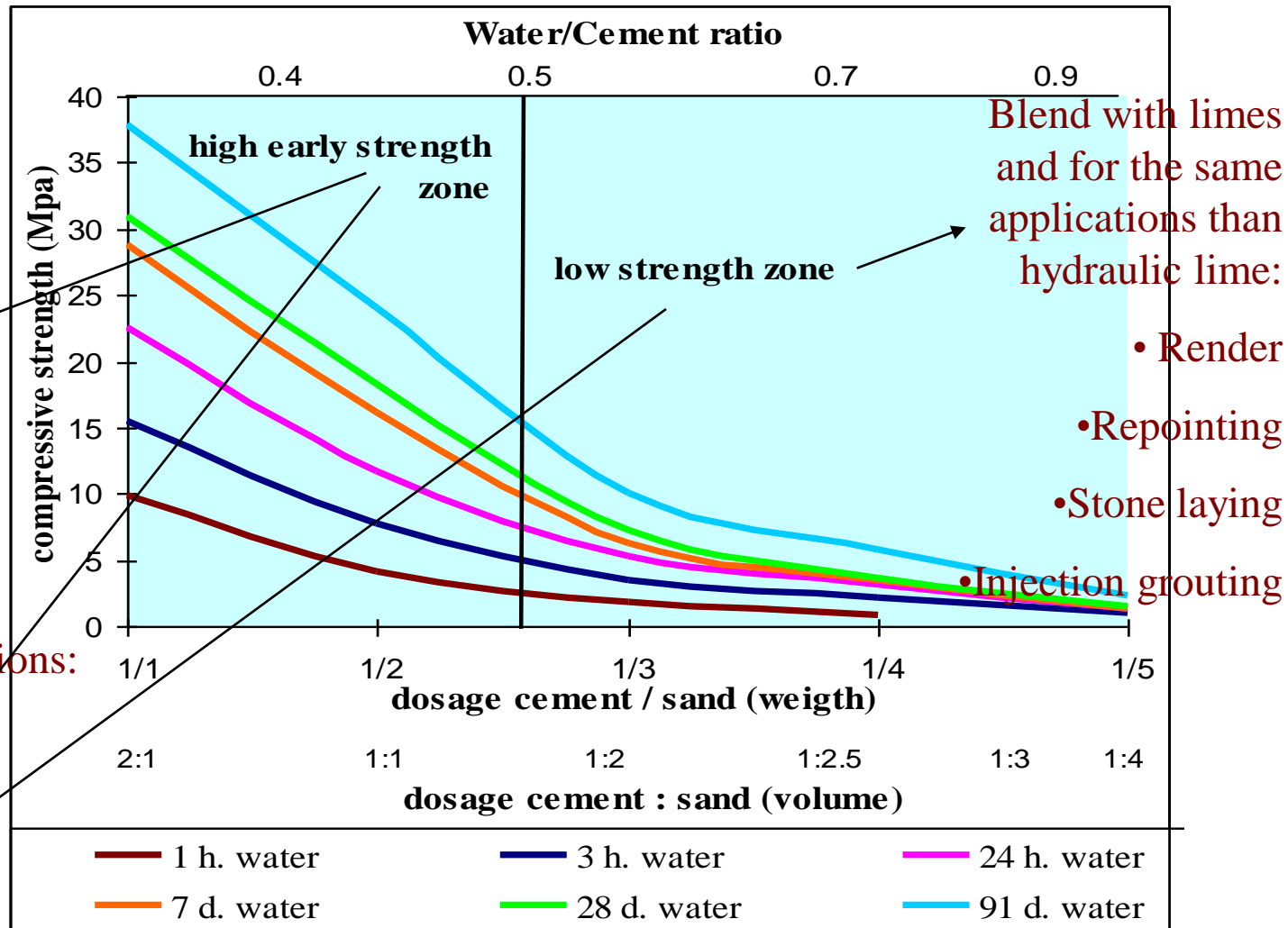
▼ Strength

Zone for structural applications:

- Fixing
- Waterproofing
- Leak stopping
- Rapid brickwork

Roman cement applications:

- Run moulding
- Cast moulding
- Render
- Façade repairs
- decoration



VICAT NATURAL CEMENT

▼ Zone for structural applications:

- ▼ Fixing
- ▼ Waterproofing
- ▼ Leak stopping
- ▼ Rapid brickwork



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19° masonry

Madeleine chapel Lanslebourg (1400m)

Hte Maurienne

Les Ateliers du Paysage (73)



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19th masonry

Madeleine chapel Lanslebourg (1400m) Hte Maurienne
Les Ateliers du Paysage (73)



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19° masonry

Madeleine chapel Lanslebourg (1400m)

Hte Maurienne

Les Ateliers du Paysage (73)



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19° masonry

Moulding at Saint-Etienne (42)



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19° masonry

Casamaures Grenoble Atelier Avenier (38)



VICAT NATURAL CEMENT

- ▼ To repair as closely as possible the 19° masonry

Casamaures Grenoble Atelier Avenier (38)



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19th masonry

Bell-tower Montmiral church Drôme (26)
Arch. P. Amette



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19° masonry

Chozeau church (38)



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19th masonry

Le Puy (43)



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19th masonry

Villa Balbaniello Rofix Italie



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19th masonry

Röfix Slovénia



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19° masonry

Röfix Salzburg



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19° masonry

Röfix Innsbruck



VICAT NATURAL CEMENT

▼ To repair as closely as possible the 19° masonry

Orangerie Sanssouci Potsdam Allemagne
S. Vohland



VICAT NATURAL CEMENT

▼ Moulding

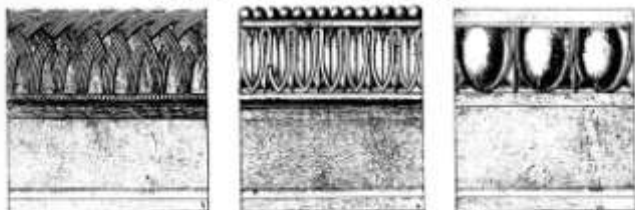


VICAT NATURAL CEMENT

▼ Moulding

ORNEMENTS EN CIMENT.

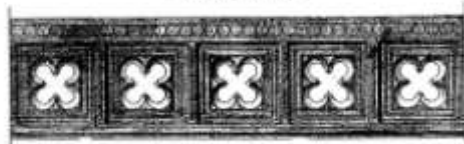
BORDURES POUR JARDINS.



VASES & VASQUES.



BALUSTRADE.



CHAPITEAU.



FRISE.



S. Swann



N° 15 - H. 0'45



N° 16 - H. 0'58



N° 20 - H. 1'



N° 21 - H. 0'45

VICAT NATURAL CEMENT

▼ Moulding



VICAT NATURAL CEMENT

▼ Moulding



VICAT NATURAL CEMENT

▼ Moulding



VICAT NATURAL CEMENT

▼ Moulding



VICAT NATURAL CEMENT

▼ Stone imitation



VICAT NATURAL CEMENT

▼ render

coloring trials Hadlow Tower Kent U.K.

S. Swann R. Pitsilli-Graham



VICAT NATURAL CEMENT

- ▼ Natural cement in mixes with Natural Hydraulic Lime add "**liveliness**" at an early age, thereby providing the lime with new properties to allow:
 - ▼ compressing the waiting period between layer applications
 - ▼ limiting shrinkage cracking, especially at early age;
 - ▼ curbing the excessive dehydration of early-age coatings
 - ▼ applying excess coating during a single run;
 - ▼ strengthening the points that feature natural vulnerability: edges, jambs;
 - ▼ working during cold weather periods, secure against freezing
- ▼ The main properties of lime are kept: walls breath (vapour permeability), excellent adhesion, low e-modulus, with in addition a low shrinkage (reduction of cracks),

VICAT NATURAL CEMENT

▼ Render

Natural cement in mixes with Natural Hydraulic Lime

Saint-Pons church(07)



VICAT NATURAL CEMENT

▼ Render

Natural cement in mixes with Natural Hydraulic Lime

Allan church (26)



VICAT NATURAL CEMENT

▼ Render

Natural cement in mixes with Natural Hydraulic Lime

Miribel les-Echelles (38)



VICAT NATURAL CEMENT

▼ Repointing

Natural cement in mixes with Natural Hydraulic Lime

Saint-Pons (07)

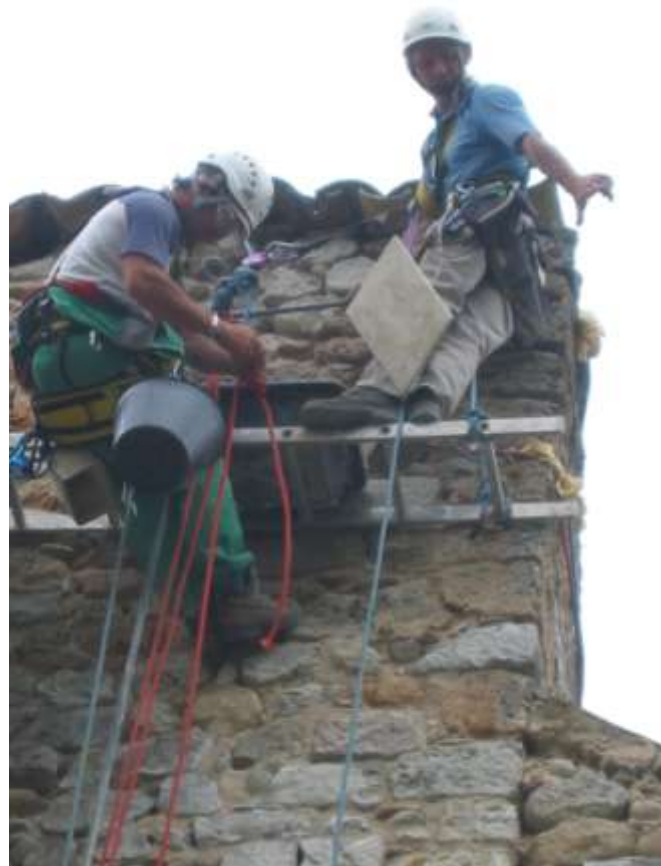


VICAT NATURAL CEMENT

▼ Rejointing

Natural cement in mixes with Natural Hydraulic Lime

Vogüe (07)



VICAT NATURAL CEMENT

▼ Rejointing

Natural cement in mixes with Natural Hydraulic Lime

Vogüe (07)



VICAT NATURAL CEMENT

▼ Rejointing

Natural cement in mixes with Natural Hydraulic Lime



VICAT NATURAL CEMENT

▼ Repointing

Natural cement in mixes with Natural Hydraulic Lime

Lagrand bridge



VICAT NATURAL CEMENT

- ▼ Sculpture on fresh
Natural cement in mixes with Natural Hydraulic Lime
Valence (26)



VICAT NATURAL CEMENT

▼ Cornice

Natural cement in mixes with Natural Hydraulic Lime

Le Puy (43)

Les Ateliers de Chanteloube



VICAT NATURAL CEMENT

▼ Colour wash

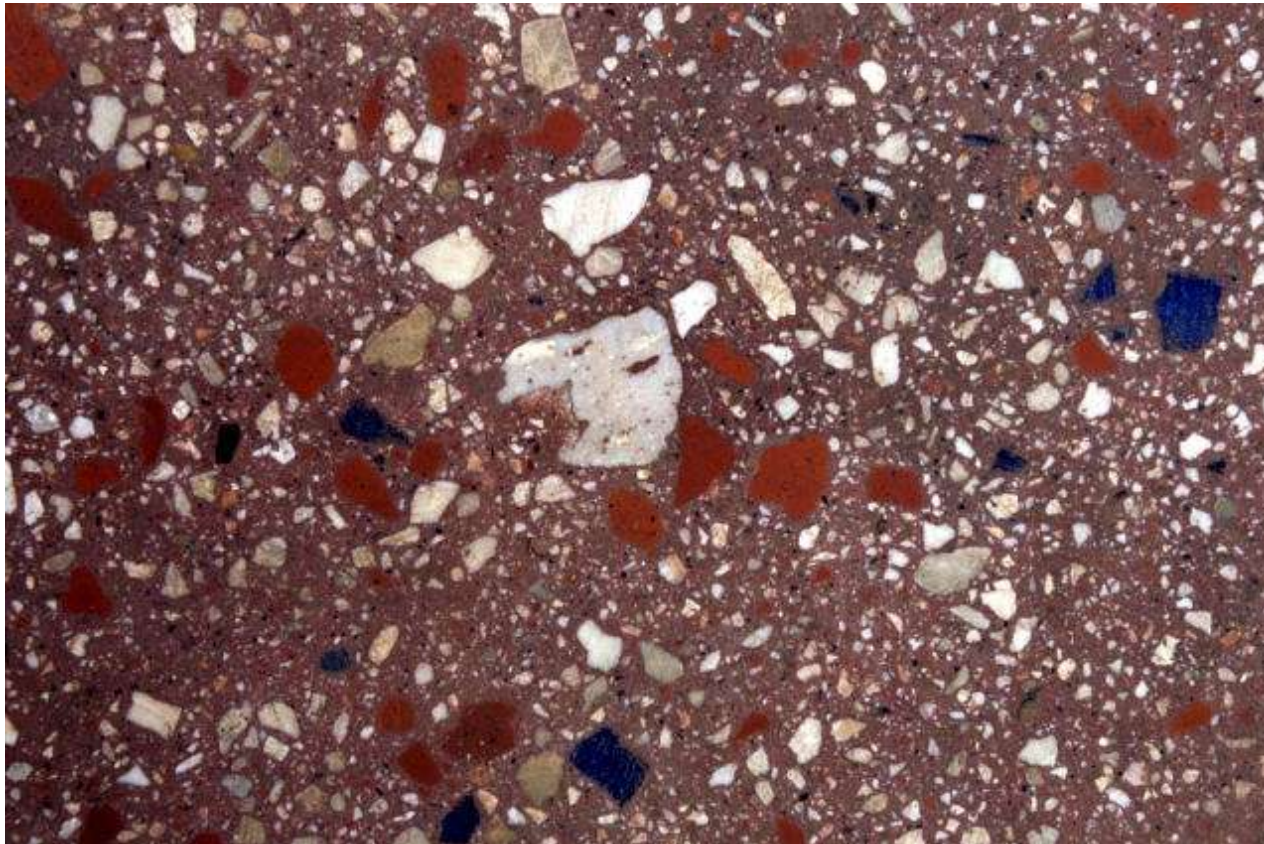
Natural cement in mixes with Natural Hydraulic Lime



VICAT NATURAL CEMENT

▼ Terrazzo

Natural cement in mixes with Natural Hydraulic Lime



Germany

VICAT NATURAL CEMENT

▼ Terrazzo

Natural cement in mixes with Natural Hydraulic Lime



Germany

VICAT NATURAL CEMENT

Oscarshall Palace Oslo Norvège

Thank for your attention



*Thank to the team
of OSCARSHALL
PALACE*