



Norcure Chloride Removal Systems

Norcure Realkalisation

Carbonation

- ◆ Reduction of pH in cover concrete which causes loss of passive oxide layer
- ◆ Low pH caused by reaction of free lime ($\text{Ca}(\text{OH})_2$) in concrete with atmospheric Carbon Dioxide (CO_2)



lime (soluble)

(insoluble)

pH 12-13

pH < 9

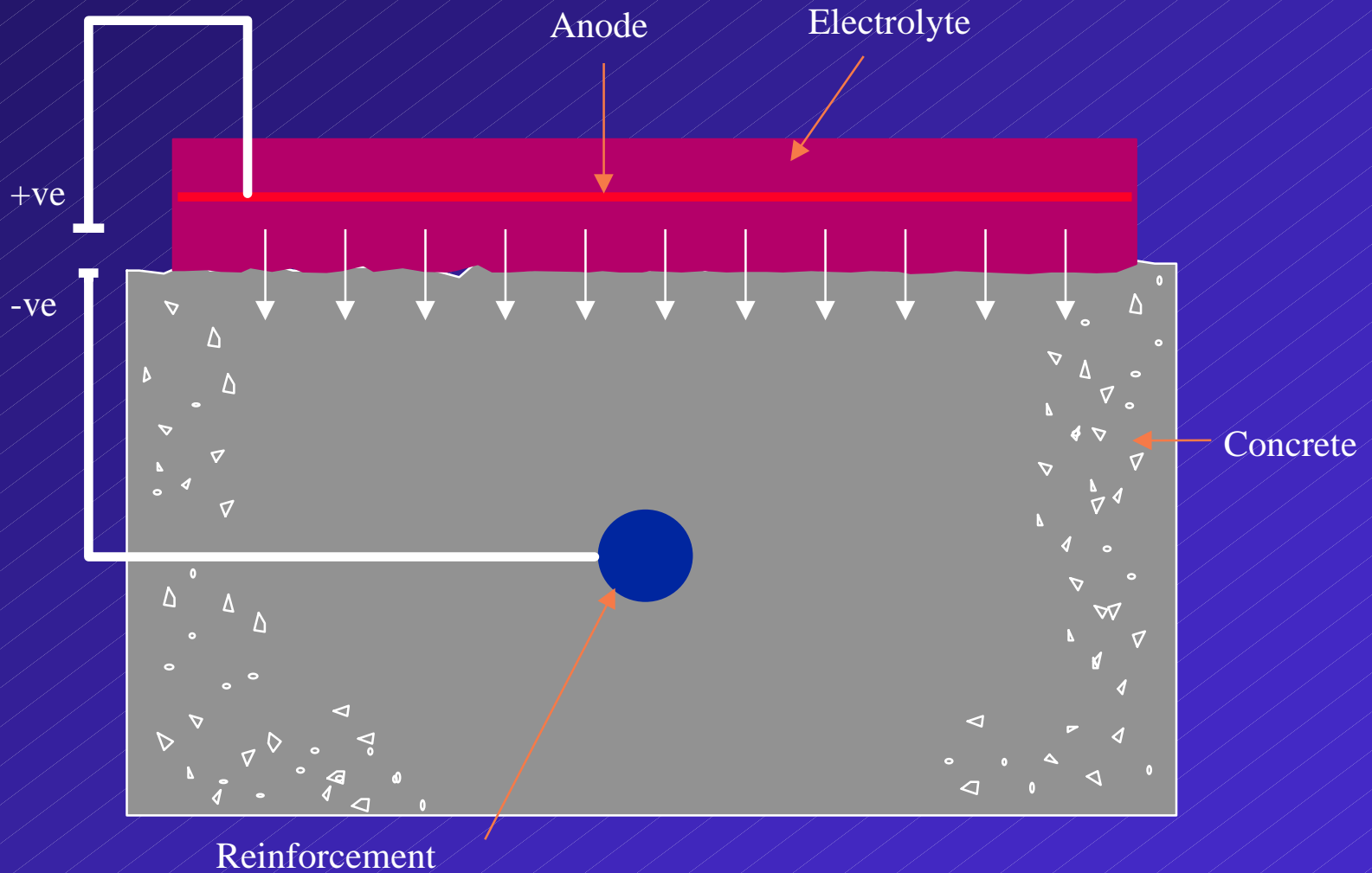
Phenolphthalein Testing of
Newly-Exposed Concrete



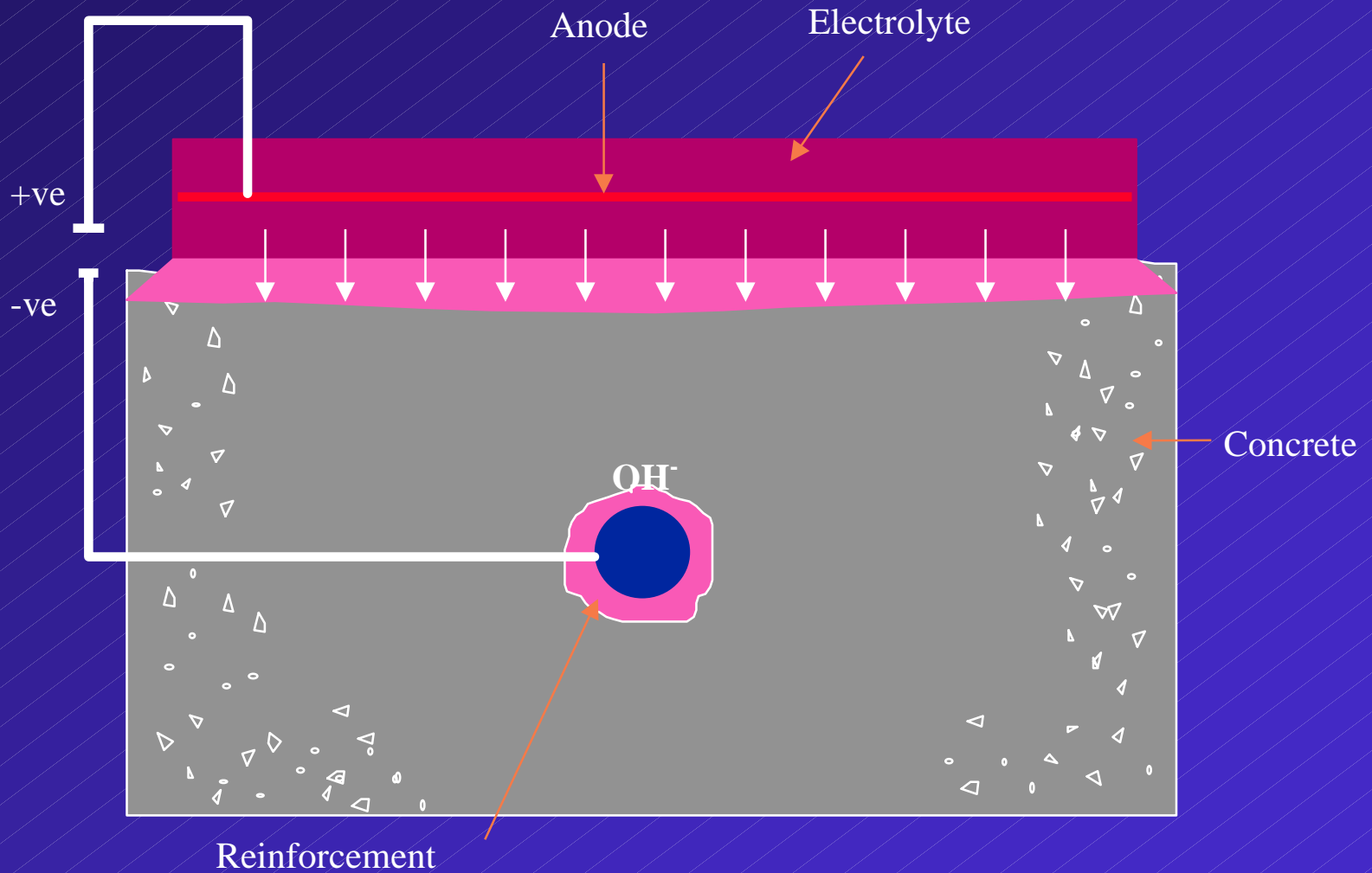
Realkalisation

- ◆ Restores alkalinity to carbonated concrete
- ◆ Reinstates passivity of steel reinforcement

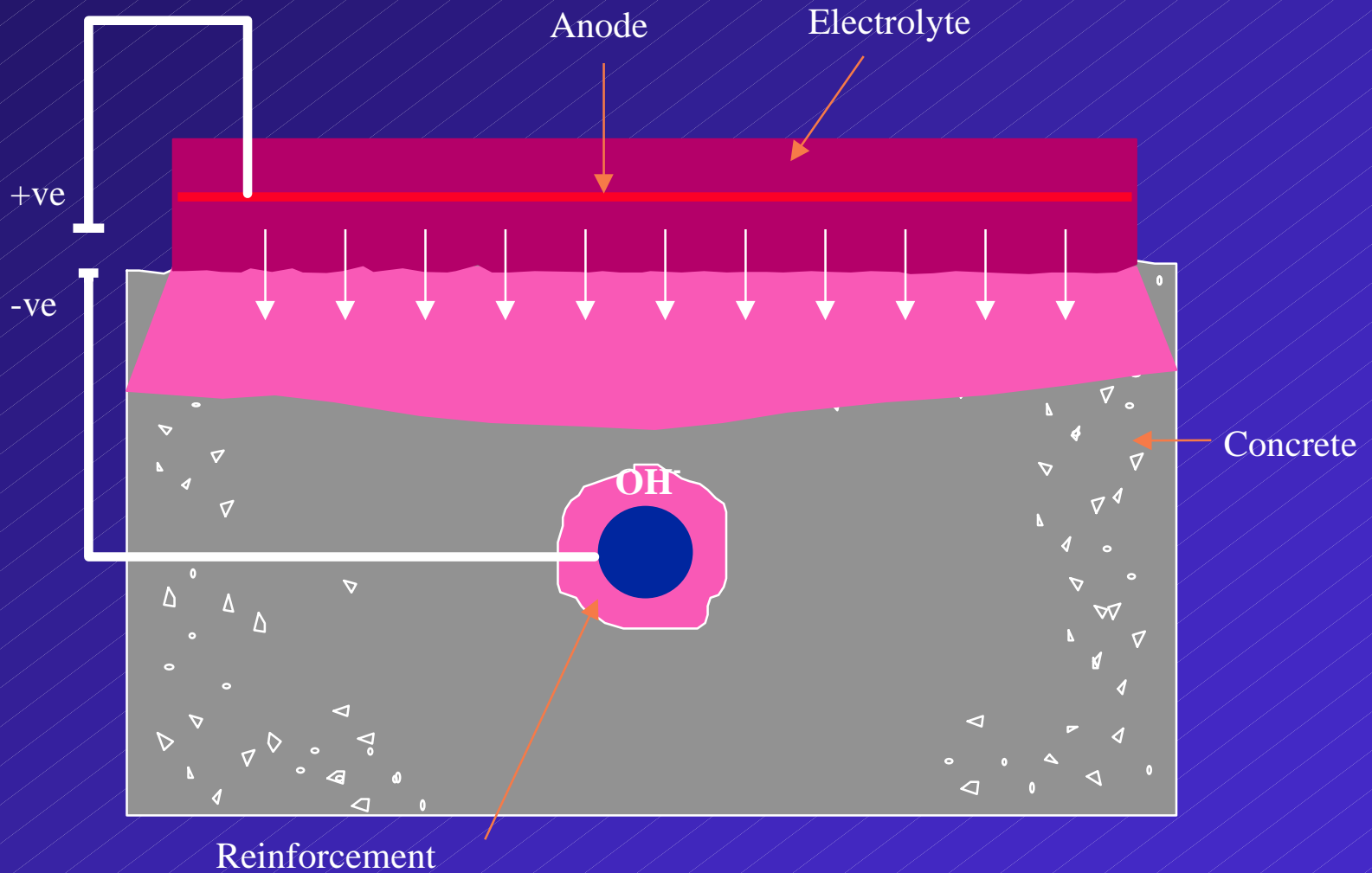
Realkalisation



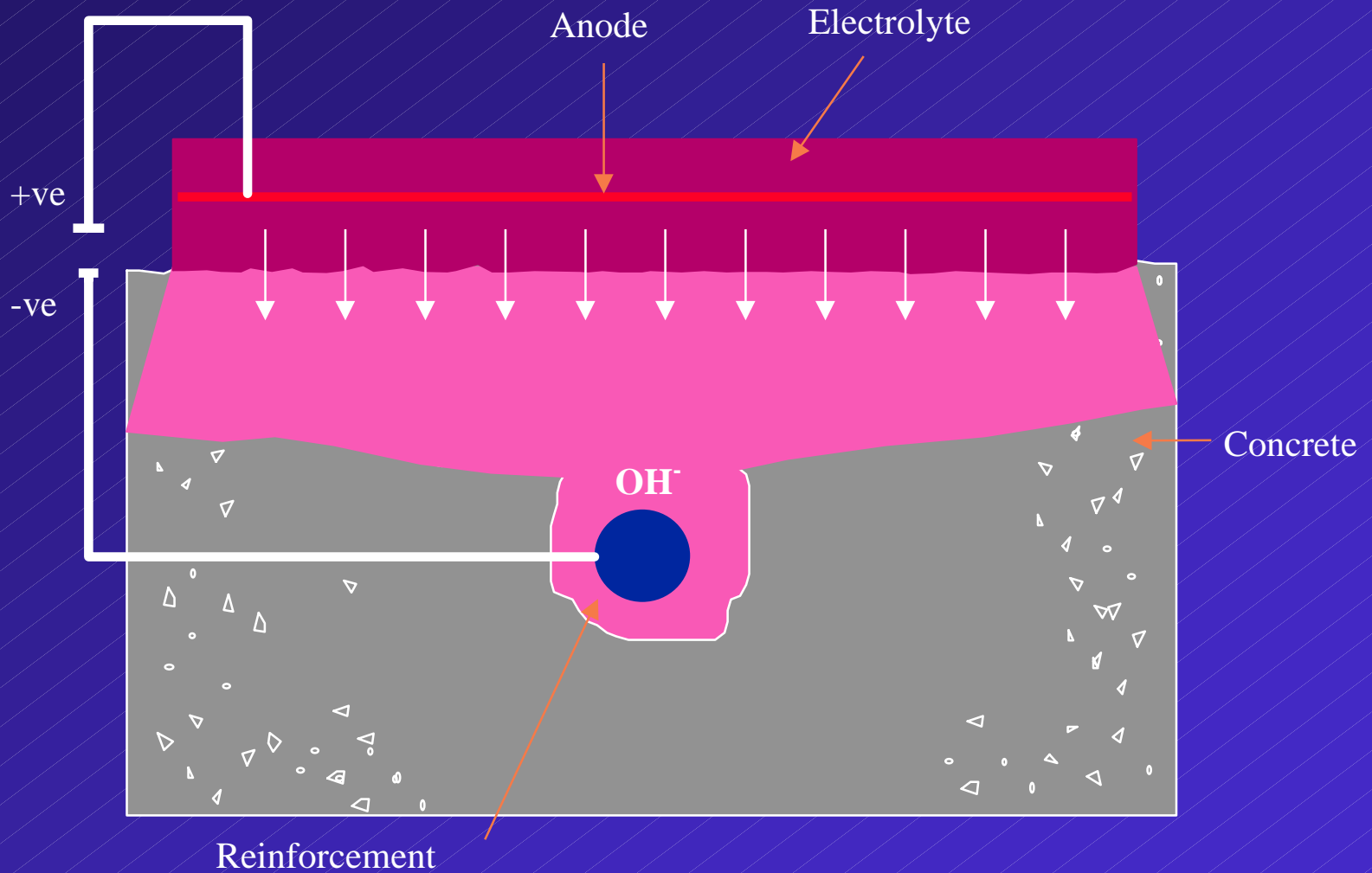
Realkalisation



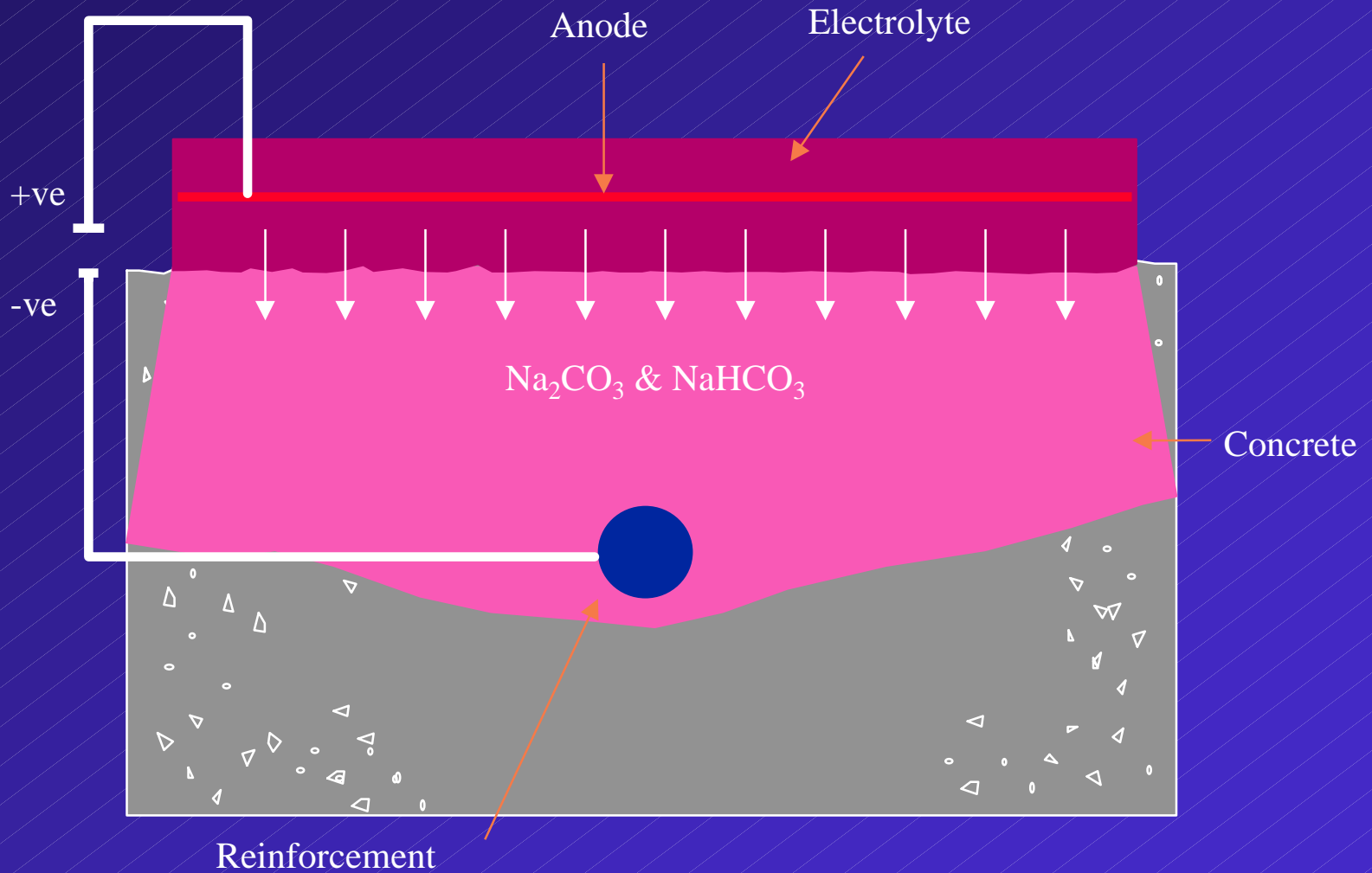
Realkalisation



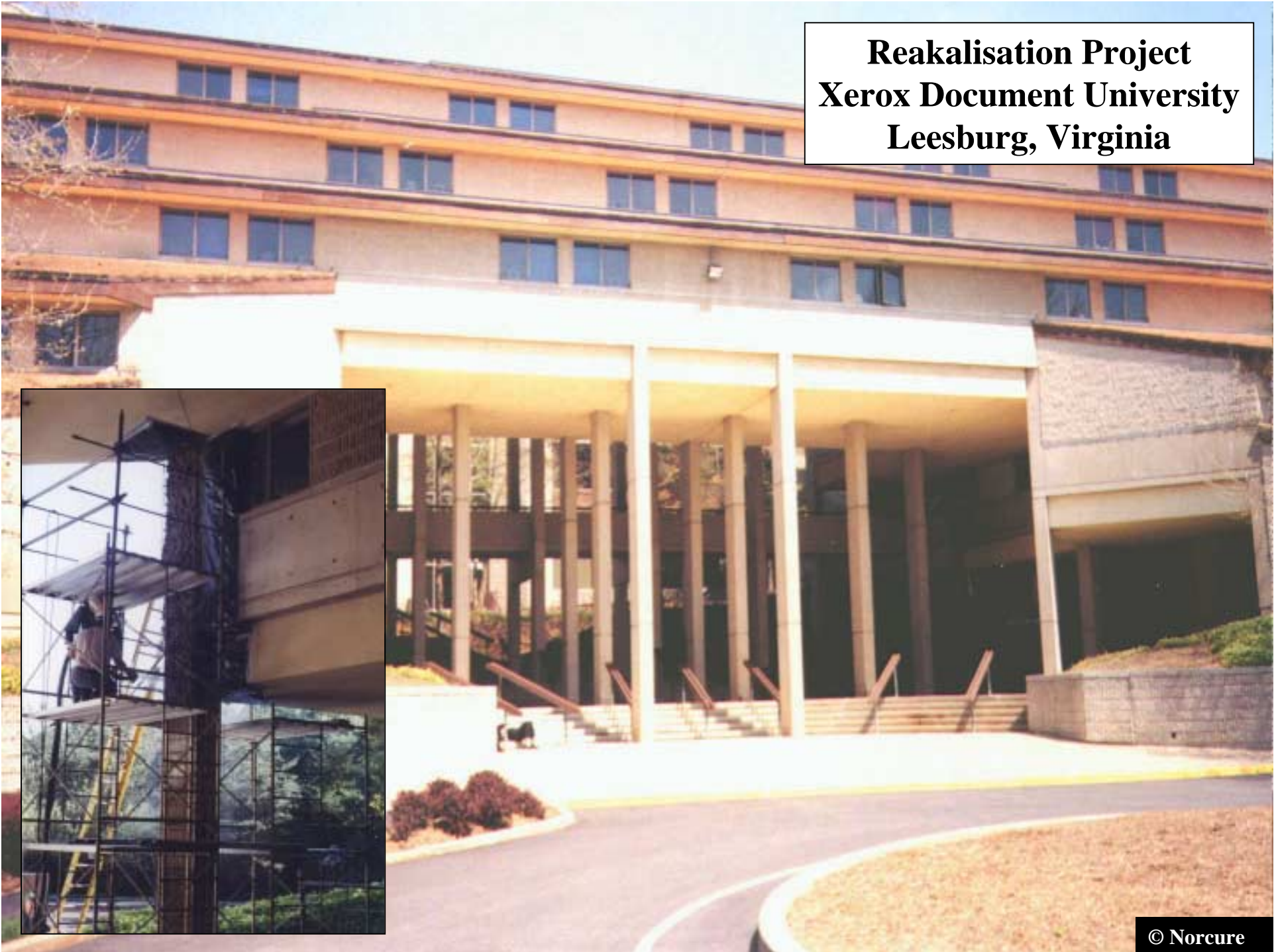
Realkalisation



Realkalisation



**Reakalisation Project
Xerox Document University
Leesburg, Virginia**

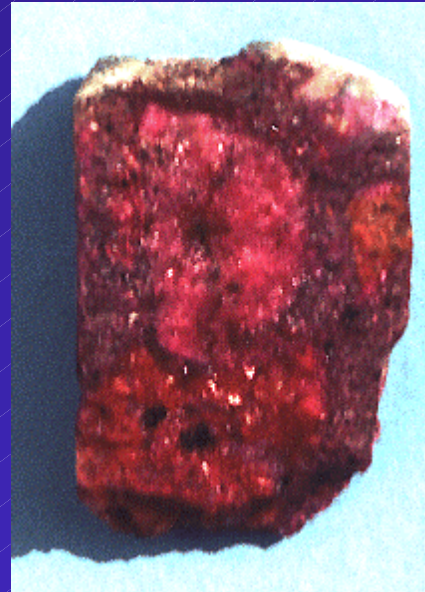


Phenolphthalein Testing

- ◆ Testing on Cores

Before

After Re-alkalisation





**Reakalisation Project
Grant MacEwan Community College
Edmonton, Alberta**

Net Result - Realkalisation

- ◆ Cover zone impregnated with high pH solution
- ◆ Low alkalinity rectified
- ◆ Entire surface treated
- ◆ Life of structure is extended