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# **Service Life Criteria in Brazilian New Concrete Structures Design Code**

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1



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## **Durability of Concrete Structures**

- ❖ **Aging**
- ❖ **Service life definition**
- ❖ **Exposure classification**
- ❖ **Concrete classification**
- ❖ **Design criteria**
- ❖ **Materials proportioning**
- ❖ **Construction rules**
- ❖ **Preventive maintenance**

2

# HOW ACI 318 CEB FIP 90 and new NBR 6118 consider each item?

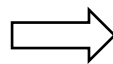


3

## AGING



- ❖ Carbonation
- ❖ Chlorides
- ❖ Fuel soot
- ❖ Bacterias
- ❖ Acid water
- ❖ Shrinkage
- ❖ Sulfates



<<< pH  
corrosion  
cracks  
spalling  
deterioration

4



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**ACI 318 / 95**

**no Service  
Life  
definition!!**

5



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**Model Code  
CEB / FIP 90  
&  
NBR 6118**

6

# 3rd step



## Exposure classification

7

# 4th step



## Concrete classification

8