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# **DURABILITY OF CONCRETE UNDER THE INFLUENCE OF SULPHATES ATTACK IN THE REGION OF OUARGLA – ALGERIA**

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**Abstract :** Several damages were found on remediation networks (pipes and manholes) in Ouargla -Algeria, due a to product quality of concrete and aggressive external environment. The objective of this work is to study the sustainability of pipes for sanitation networks in this region under the effect of sulfates attack (especially HS). To do this, Sulphate resisting cement (SRC) specimens have been preserved in the real world and the results were compared with those of control specimens. According to the study, we concluded that the cement concrete SRC submitted acceptable mechanical properties in wastewater compared to concrete witnesses and penetration of aggressive agents rather slow, where a small decline in mechanical compressive strength from 3% to the duration of 365 days of storage. But the exposure of cement concrete SRC to H<sub>2</sub>S gas, shows a degradation accelerated concrete under the effect of HS gas in particular after 90 days of age, when a 40% regression of approximately compressive strength compared witnesses specimens at the age of 365 days.

**Keywords :** Durability, sulphate resisting cement (SRC), sanitation, waste water, HS gas, H<sub>2</sub>S gas