

Florence, Italy
30th September – 2nd October 2019

**(2370) Pipe
Lining and
Coatings**

**Quality Control
Factors of CIPP
Construction
Management on
Water Main
Rehabilitation**

Quality Control Factors of CIPP Construction Management on Water Main Rehabilitation

ABSTRACT: Cured-In-Place Pipe (CIPP) technology is worldwide conducted to various pipeline rehabilitations. Due to the requirement of high technique level, insufficient training for construction, the restriction of technical transfers, and the inadequacy of equipment resulted from limitations of application authorization, some failure projects have happen in the past years. For example, the problems were collapse of cured pipeline, reversal pressure decline, and excessive longitudinal folks etc. Once the lining reverse and solidification operation were mistaken, the cost of restoration replacement and the overdue risk of contract period must be assumed. Therefore, material preparation and on-site construction quality management are essential issues. In order to establish guideline values of quality management at each stage, this paper proposed critical operation factors for the detection of resin mixing uniformity, permeability, and the control of reversing potential head, creep condition, curing temperature and time from resin soaking, on-site reversal and lining curing operation of CIPP method. The critical operation factors were discussed by the case study of practical projects with 360m and 452m MJP Φ 1000mm water mains of CIPP rehabilitation in urban area of Taipei. The construction quality management control factors and guidelines of CIPP in this paper can be applied to other similar water pipeline rehabilitative projects for enhancing the reliability of CIPP techniques and reducing the risk of project failure.

Key words : CIPP, reversing potential head, curing temperature