

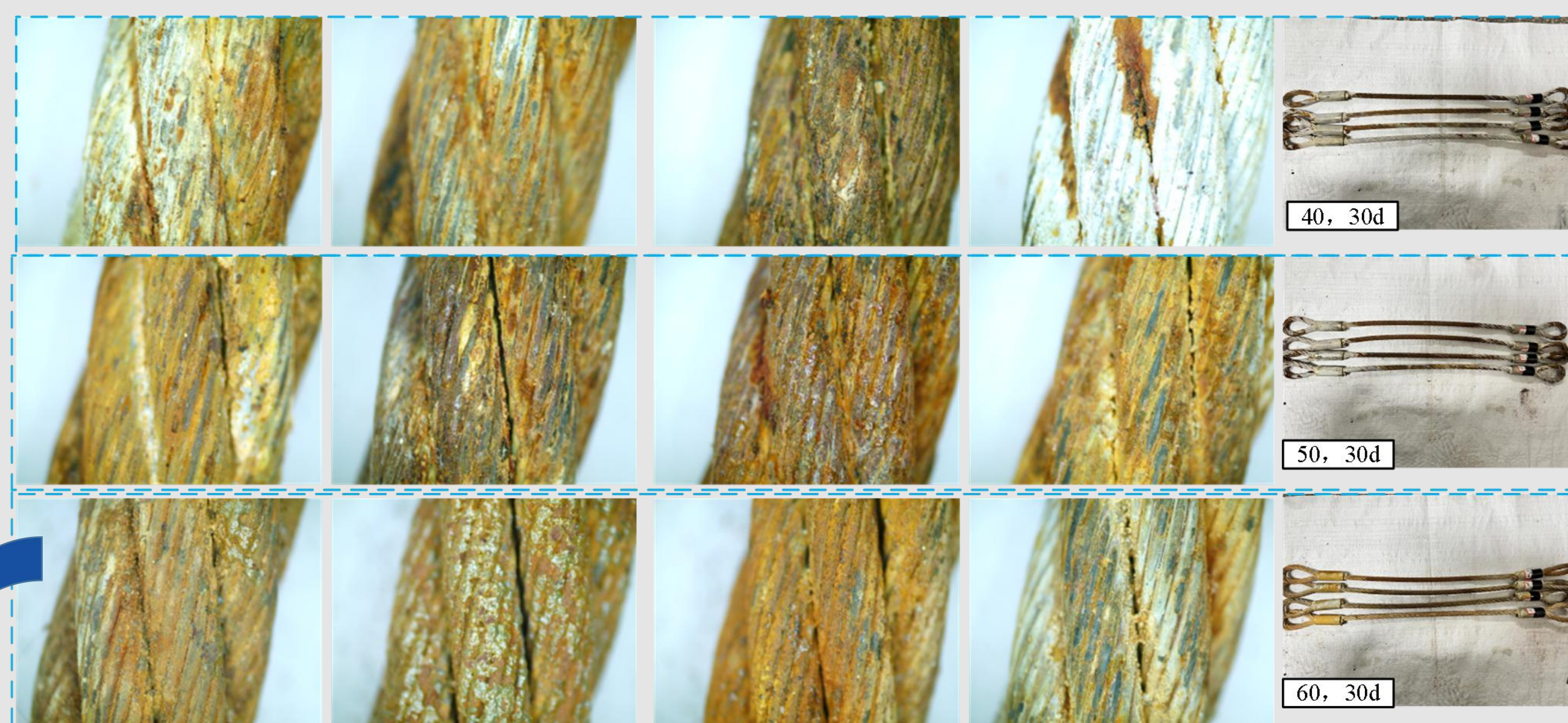
SOETE LABORATORY – EMSME (EA08)

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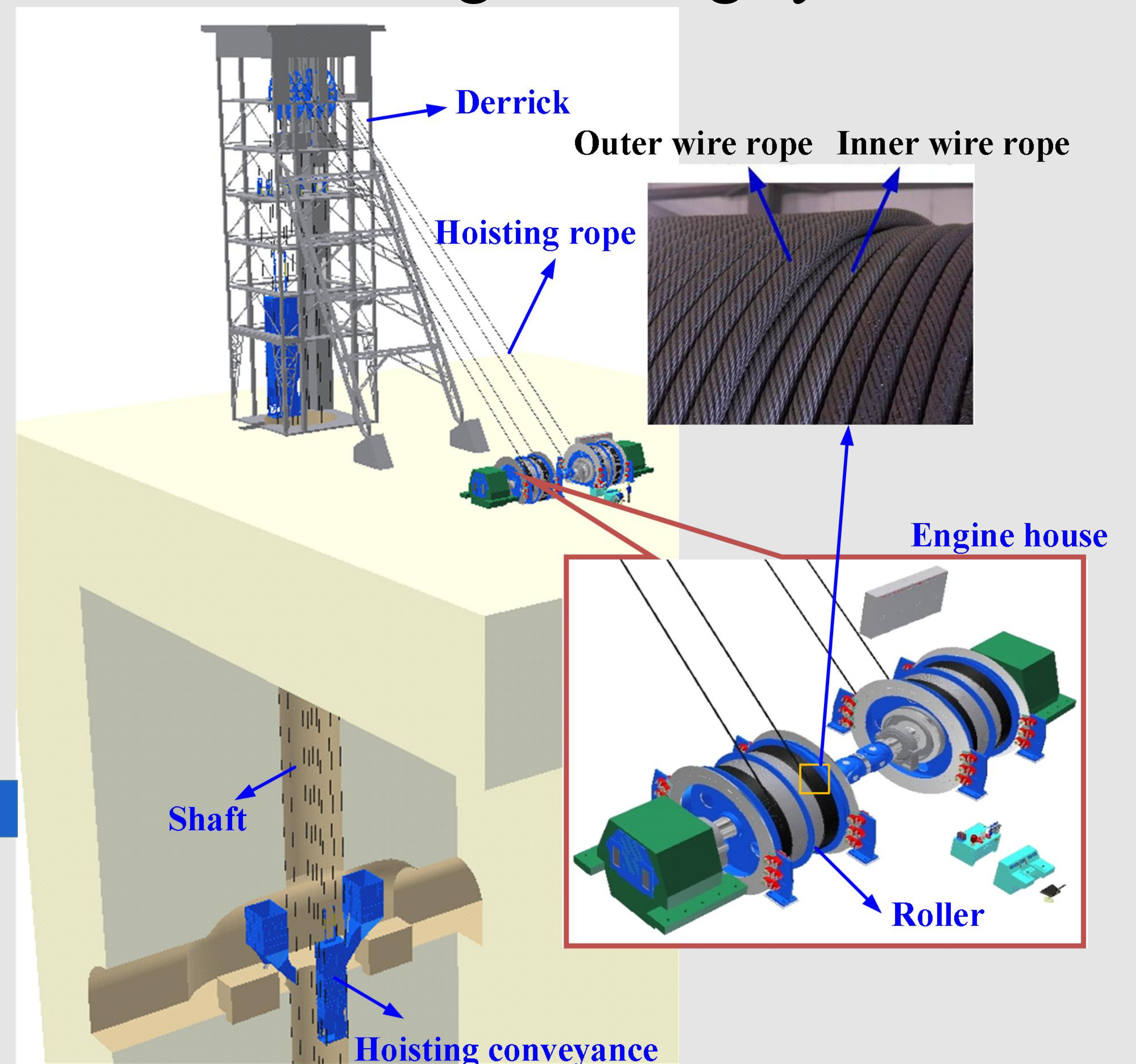
EFFECT OF TEMPERATURE ON CORROSION DAMAGE AND BENDING FATIGUE LIFE OF WIRE ROPES

corrosion is inevitable as the exposure of the wire rope to the atmosphere, which significantly reduces the mechanical properties of the lifting components.

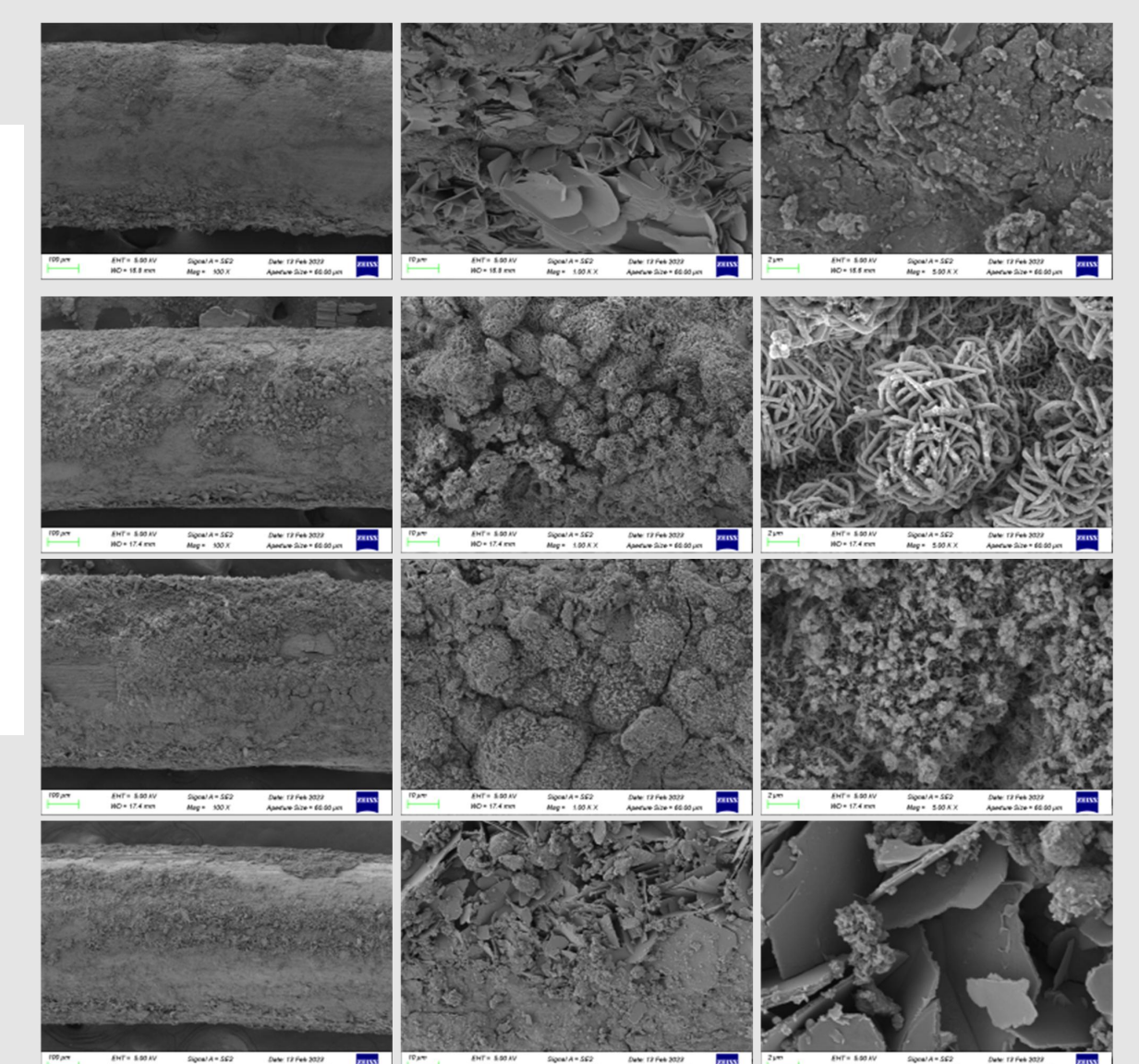
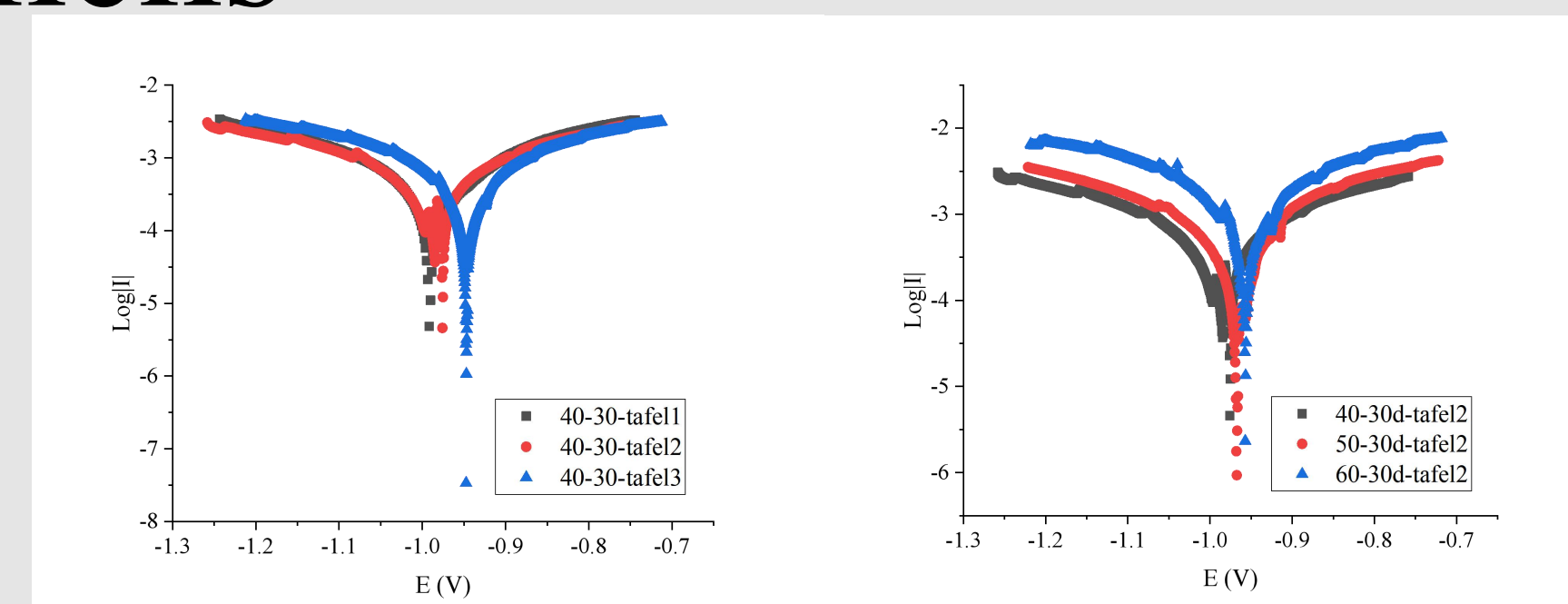
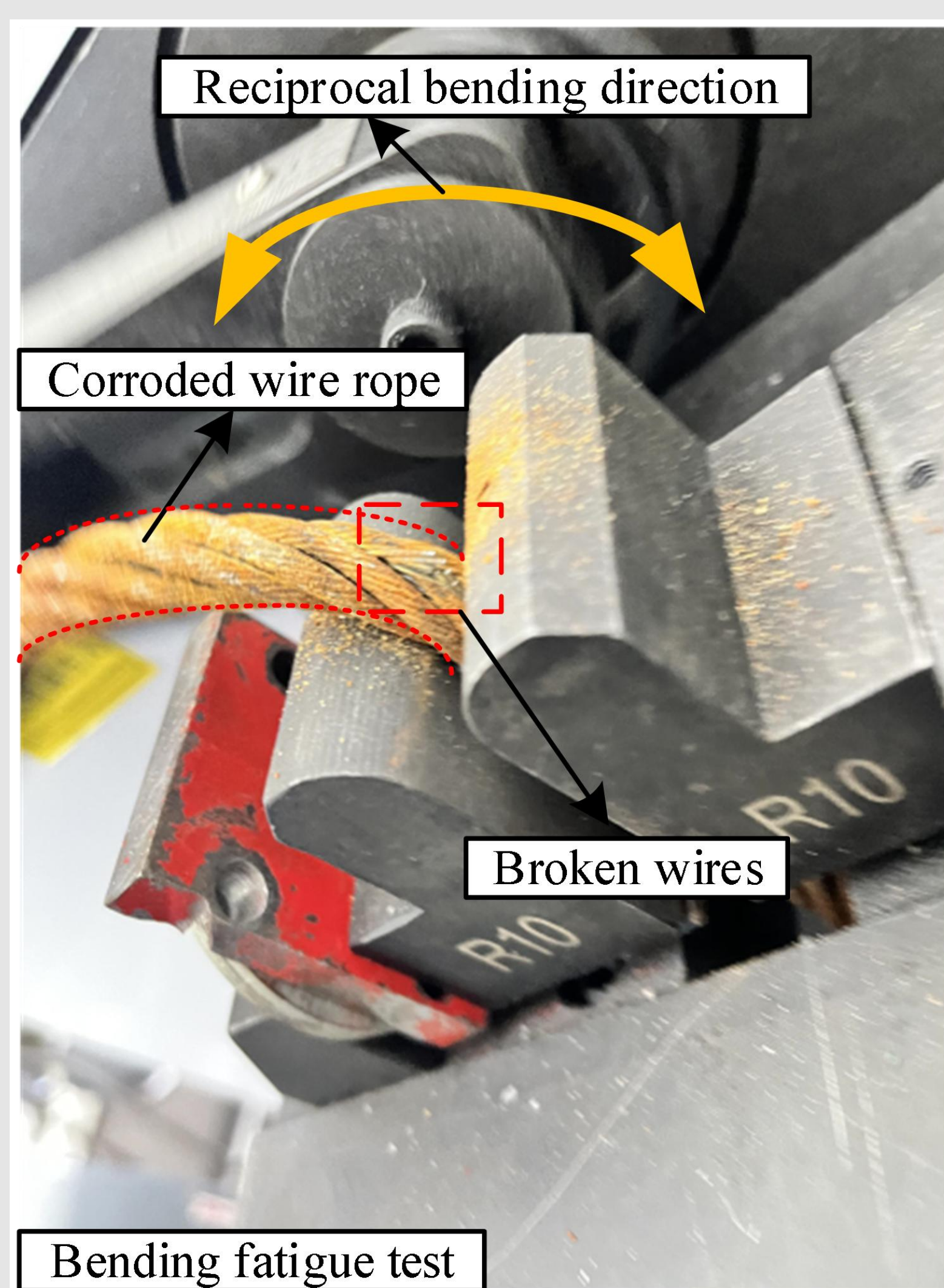
- ◆ In the corrosion problem, the wire rope service environment is harsh, temperature greatly affects the corrosion process, temperature - corrosion coupling to accelerate the degradation of its mechanical properties.
- ◆ Obtaining an accurate prediction of the remaining fatigue life of a damaged wire rope is important for engineering applications.



I. winding hoisting system

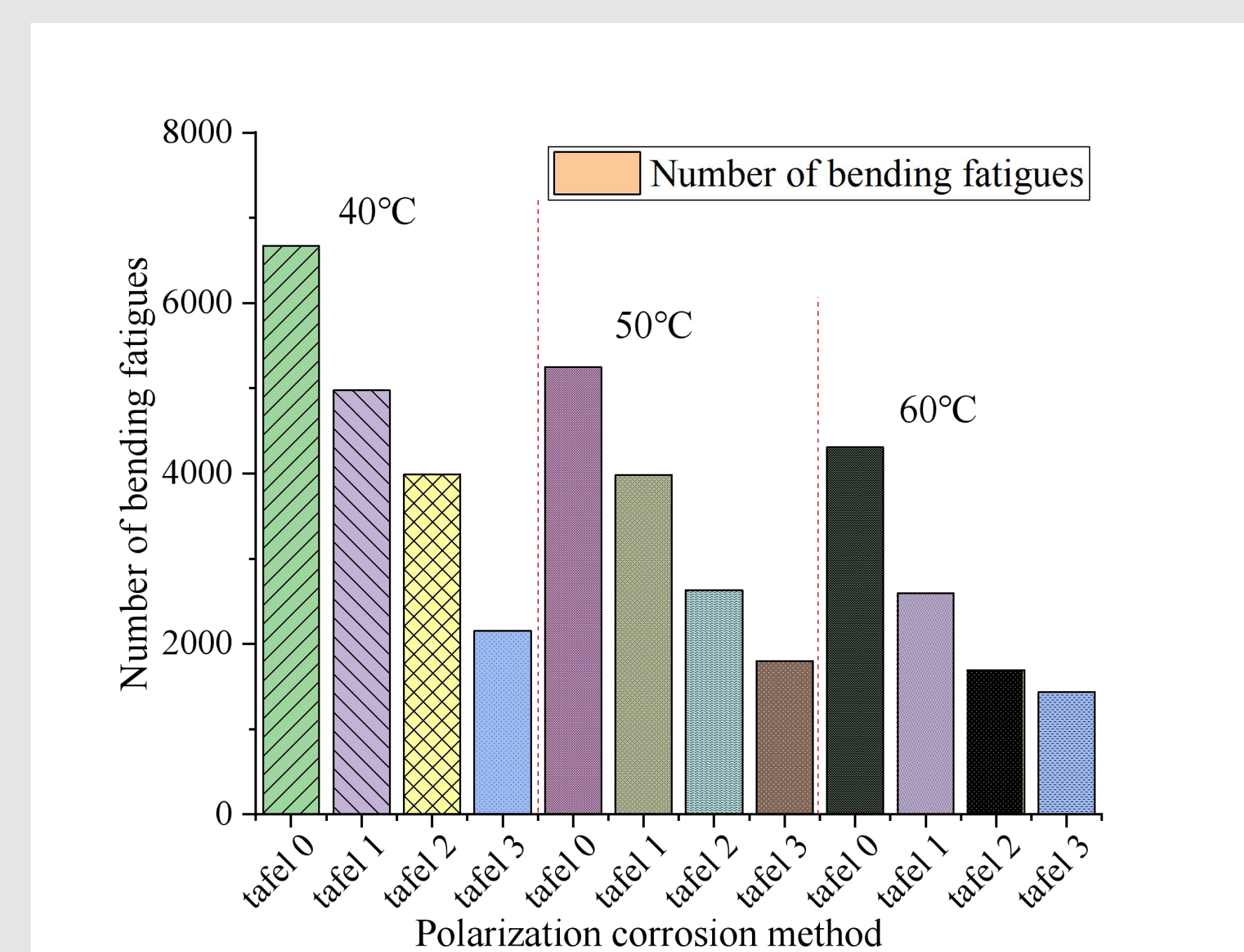


II. Polarised corrosion wire rope specimens



IV. Corrosion surface analysis - polarization curves, SEM,

III. Reciprocal bending fatigue test



< Research Targets >

The main aim of this project is to investigate surface damage characteristics and residual bending fatigue life of polarised corroded wire ropes at different temperatures by experimental analysis.

VI

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