

SUMMARY OF NEW CONCLUSIONS OF PhD THESIS

Title: “*Study on the ability of inhibition corrosion of rose myrtle leaves extract (Rhodomyrtus tomentosa (Ait.) Hassk.) aiming at application for industrial pickling*”

Major: Theoretical and Physical Chemistry

Classification: 9.44.01.19

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New conclusions

This thesis is implemented with the purpose of studying the corrosion inhibition ability of CT3 steel substrate of rose myrtle (*Rhodomyrtus tomentosa* (Ait.) Hassk.) leaves extract, figuring out the kinetic and mechanism of corrosion inhibition process. And applying the plant extract as a corrosion inhibitor in metal pickling process for CT3 steel in acidic environment.

After the implement period, the following new results were obtained:

1. Having successfully made rose myrtle extract and isolating 06 segments from D1 ÷ D6 using Dianion column chromatography (adsorbent is Dianion HP-20) and enriching tannin content (adsorbent Sephadex LH-20).

2. Studied, compared, assessed the inhibition corrosion ability of rose myrtle extract, the extract segments, enriched tannins on CT3 steel as well as propose the adsorption model, corrosion inhibition mechanism and kinetic model of rose myrtle extract in 0.5M H₂SO₄ medium.

3. The result shown that rose myrtle extract is an inhibitor working on adsorption mechanism with impact mainly on cathode. The main component to the inhibiting corrosion impact of the plant extract is tannin present in DCS. Based on that, applying the rose myrtle extract on pickling process in practical samples, working

as an environmentally friendly corrosion inhibitor in the industrial rust removal process, especially for some industrial acidic cleaning systems.

Supervisor

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