CONTENTS	Page No.	
LIST OF FIGURES.	i	
LIST OF TABLES.	ix	
Aim of the present work.	I	
CHAPTER 1. INTRODUCTION.		
1.1- The Electrochemical Nature of Corrosion.	1	
1.2-Classification of corrosion.	3	
1.3-Factors influencing corrosion.	3	
1.4-Various forms of corrosion.	4	
1.4.1-General and local electrochemical corrosion.	4	
1.4.2-Galvanic corrosion or dissimilar metal	4	
corrosion.		
1.4.3-Crevice corrosion.	5	
1.4.4-Filiform corrosion.	5	
1.4.5-Intergranular corrosion.	5	
1.4.6-Pitting corrosion.	6	
1.4.7-Exfoliation.	6	
1.4.8-Stress corrosion cracking.	6	
1.4.9-Corrosion fatigue cracking.	7	
1.4.10-Fretting corrosion.	7	
1.4.11-Erosion corrosion.	7	
1.4.12-Cavitation corrosion.	7	
1.5-Electrochemical theory of corrosion.	8	
1.6-Corrosion inhibitors.	8	

1.6.1-Classification of inhibitors.	8	
1.7Literature survey on corrosion inhibition of	10	
copper in aqueous solutions.		
CHAPTER 2. EXPERIMENTAL TEQUNIQUES.		
2.1-Chemical composition of material samples	28	
2.2-Chemicals and solutions	28	
2.2.1-Chemicals	28	
2.2.2-Solutions	30	
2.3-Experimental techniques	31	
2.3.1-Chemical technique(weight loss method)	31	
2.3.2-Electrochemical technique	32	
2.3.2.1-Galvanostatic polarization	32	
2.3.2.2-Potentiodynamic anodic polarization	36	
CHAPTER 3. RESULTS AND DISCUSSION.		
SECTION (A)		
STUDING THE CORROSION BEHAVIOR OF COPPER		
BY THE WEIGHT LOSS METHOD.		
3.1-Corrosion inhibition behavior.	38	
3.2-Role of anions in corrosion inhibition of copper in	47	
acidic solutions and synergistic effect.		
3.3-Adsorption isotherm.	63	
3.4-Effect of temperatures.	66	
3.5-Activation parameters of corrosion process.	66	

SECTION (B)

STUDING THE CORROSION BEHAVIOR OF COPPER BY THE ELECTROCHEMICAL TECHNIQUE.

3.6-Galvanostatic polarization.	96	
SECTION (C)		
PITTING CORROSION OF COPPER IN NaCl AND ITS		
INHIBITION BY QUINAZOLINE COMPOUNDS.		
3.7-Introduction.	110	
3.8-Susceptibility of copper to pitting corrosion by	111	
chloride ions.		
3.9-Inhibition of pitting corrosion of copper.	115	
3.10-Inhibition of pitting corrosion of copper by	115	
quinazoline compound.		
3.11-Chemical structure of the inhibitors and	127	
corrosion inhibition.		
Appendix.	130	
REFERENCES.	133	
English SUMMARY.	139	
ARABIC SUMMARAY.	İ	