

Iron Sulfide Detection Kit

Instruction Manual

Manual No. 372128 Revision D

Instrument No. 210156

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Fann Instrument Company

Iron Sulfide Detection Kit Instruction Sheet

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Houston, Texas, USA

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Contact Fann Instrument Company

Phone	1-281-871-4482 1-800-347-0450
Fax	1-281-871-4358
Postal Address	Fann Instrument Company P.O. Box 4350 Houston, Texas, 77210 USA
Shipping Address	Fann Instrument Company 14851 Milner Road, Gate 5 Houston, Texas, 77032, USA
Online	www.fann.com fannmail@fann.com

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1 Introduction

This test kit contains all of the supplies, equipment and instructions necessary to test steel armor wire (and other steel objects) for the presence of iron sulfide, which can be indicative of exposure to hydrogen sulfide.

1.1 Document Conventions

The following icons are used in this instruction manual.



NOTE. Notes emphasize additional information that may be useful to the reader.



CAUTION. Describes a situation or practice that requires operator awareness or action in order to avoid undesirable consequences.

2 Safety

Chemicals in this kit may cause hazards to the user's health by direct contact, inhalation, ingestion, explosion or fire. Read all warnings, precautions and hazard classifications (fire, health and reactivity) on the container label. For in depth information on handling, reactivity with other substances, storage and other safety information refer to the "Material Safety Data Sheet (MSDS)" for each chemical. If personal contact or an environmental accident occurs, use the counteractive measures outlined on the label and on the MSDS sheet.



NOTE. Some of the iron in the sample may be dissolved by the Detecting Solution producing a yellow-green solution. This should not be mistaken for the yellow precipitate formed by the sulfide.



CAUTION. This test can be performed in place, on steel, cement lined, or plastic coated equipment without removing the sludge. Do not use on aluminum or plated metals.

3 Procedure

Observe the following procedure to use the Iron Sulfide Detection Kit:

1. Take a 6" length of armor, cut into 1/2" lengths and place it in a polyethylene titration dish.
2. Drop several drops of Iron Sulfide Detection Solution on the armor. Foaming will occur if the zinc coating is still present on the armor wire.
3. If a bright yellow precipitate (arsenic sulfide) is formed, iron sulfide is present on the armor.
4. If the sample is so oil wet that the detecting solution cannot penetrate it, add a few drops of the foaming agent to water wet the sample. If the sample is paraffin coated, heat may have to be applied to obtain a test.
5. Wash and dry the titration dish. Store the articles back in the box.

3.1 Test Results

The presence of iron sulfide on the surface of the armor wire can confirm that the cable has been exposed to hydrogen sulfide and therefore is likely to have suffered H₂S damage. The absence of a detectable iron sulfide on the surface is not proof, however, that the cable was not exposed to H₂S.

4 Parts List

Table 4-1 Iron Sulfide Detection Kit Parts List

Part Number	Description
210114	Iron Sulfide Detection Solution, 2oz
101443609	Foaming Agent, 2oz
372128	Instruction Sheet
205902	Polyethylene Titration Dish, 140ml

5 Warranty and Returns

5.1 Warranty

Fann Instrument Company warrants only title to the equipment, products and materials supplied and that the same are free from defects in workmanship and materials for one year from date of delivery. **THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED OF MERCHANTABILITY, FITNESS OR OTHERWISE BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE.** Fann's sole liability and Customer's exclusive remedy in any cause of action (whether in contract, tort, breach of warranty or otherwise) arising out of the sale, lease or use of any equipment, products or materials is expressly limited to the replacement of such on their return to Fann or, at Fann's option, to the allowance to Customer of credit for the cost of such items. In no event shall Fann be liable for special, incidental, indirect, consequential or punitive damages. Notwithstanding any specification or description in its catalogs, literature or brochures of materials used in the manufacture of its products, Fann reserves the right to substitute other materials without notice. Fann does not warrant in any way equipment, products, and material not manufactured by Fann, and such will be sold only with the warranties, if any, that are given by the manufacturer thereof. Fann will only pass through to Customer the warranty granted to it by the manufacturer of such items.

5.2 Returns

For your protection, items being returned must be carefully packed to prevent damage in shipment and insured against possible damage or loss. Fann will not be responsible for damage resulting from careless or insufficient packing.

Before returning items for any reason, authorization must be obtained from Fann Instrument Company. When applying for authorization, please include information regarding the reason the items are to be returned.

Our correspondence address:

Fann Instrument Company
P.O. Box 4350
Houston, Texas USA 77210

Telephone: 281-871-4482

Toll Free: 800-347-0450

FAX: 281-871-4446

Email fannmail@fann.com

Our shipping address:

Fann Instrument Company
14851 Milner Road, Gate 5
Houston, Texas USA 77032