HTHP Mud Filter Press

TYPE: SL-GGS-42

**Function**

HTHP mud filter press, SL-GGS-42, is a kind of analog analyzer. It can be used to measure the fluid loss through the filter paper and screen with an area of 22.6 cm² and the thickness of the filter cake within 30 mins when the pressure is 4.2 MPa and the temperature is 150°C-170°C.

**Basic Parameter**

1. Power source: alternating current of 220V±10% 50Hz, power of 400W
2. Air supply: 5 MPa Nitrogen gas, carbon dioxide or compressed air
3. Working temperature: ≤180°C
4. The working pressure of mud cup: 4.2 MPa
5. The pressure of back pressure regulator: 0.7 MPa
6. Effective fluid loss area: 22.6 cm²

**Structure**

The instrument includes air supply device, heat cup, mud cup, temperature control instrumentation, stand, basement, and so on.

1. Joining nut of CO2 supply; 2. pressure reducer; 3. jioning nut of pressure reducer; 4. value of air supply; 5. electronic temperature control instrumentation; 6. high pressure pipe; 7. power plug; 8. thermocouple; 9. value pin; 10. communicating value rod; 11. mud
cup; 12. heating muff; 13. back pressure value; 14. axis of support; 15. air release value; 16. base; 17. handle of the backpressure adjuster

**Operating rules**

1. Join the pressure reducer with the gas bottle, put the joining nut on the outgoing side of the pressure reducer.

2. Put through the air release valve.

3. Join the temperature control instrumentation with the aerial plug of the heating muff and put the power plug into the proper power source, put the thermocouple into temperature hole of the heating muff.

4. By electronic temperature control instrumentation, the real temperature of the heating muff after heating the bottom thermocouple can be read. Press the inching switch on the left of electron adjuster and the real temperature of the mud cup can be measured by pencil thermocouple. When the measured temperature is close to the set temperature, the temperature difference can be see on the meter. After reaching the set value, the electronic temperature control instrumentation begin to work. It can control the temperature by relay.

5. When the temperature is constant, turn off the pressure assembly and open the mud cup to pour in mud to the level of indicating line. Make sure that the mud does not flow to the O-ring and the packing elements.

6. Put filter paper on the O-ring carefully and then push the lid of the cup into mud cup slowly. Make sure that every set screw hole of the lid aims at every screw hole of the main body when screw up the set screw. Turn off the connecting valve on the lid of mud cup.

7. Put the mud cup into the heating muff until the lid touch the locating pin on the bottom and put the thermocouple into the small hole of the mud cup.

8. Turn off the connecting valve and fix the backpressure receiver.

9. Open the main switch of the gas bottle and adjust the pressure reducer to set the pressure gange tobe 0.7MPa. Then adjust the handle of the backpressure adjuster to set the pressure gange tobe 0.7MPa too. Rotate the upper air inlet valve half wind to the left with a wrench and maintain the pressure of the mud cup at 0.7MPa to guard against the mud evaporation in the case of being heated.

10. When the temperature reach the experimental value and becomes steady, adjust the pressure reducer to set the pressure of the mud cup tobe 4.2MPa. Rotate the bottom
valve half wind to the left with a wrench and the filtration begins. Gather the filtrate for 30mins and maintain the temperature fluctuation of the mud cup at ±3°C. If the backpressure ascends, open the triple valve of the receiver to let go some filtrate into cylinder. The heating time of the sample should within 1h.

11. After leaking off 30mins, turn off the the main pressure switch, the upper and bottom valve and the temperature control instrumentation.

12. Let off the pressure reducer and the handle of the backpressure adjuster. Release the pressure of the two pressure reducer.

13. When the backpressure receiver becomes cool, open the air release valve to let the filtrate flow into cylinder. Note down the value of the filtrate, experimental pressure, temperature and time.

14. Take off the valve pin and tear down the main valve of the pressure device and the backpressure receiver.

15. Pick out the cake cup and cool down to the room temperature. Open the connecting valve to release the pressure of the mud cup. Let off the lock screw of the mud cup and take off the lid to measure the cake thickness.

**Maintenance**

1. Pick out the cake. Wash the mud cup and dry in the air.

2. Do not screw the connecting valve too tightly.

3. Adjust the pressure gradually. Make sure the highest pressure is less than 4.2MPa and the lowest pressure is higher than 0.7MPa.

4. After the experiment, cut off the power, unplug and keep the electron controller.

5. The strike and strenuous exercise are forbidden during transportation.

**Service**

1. The instrument has been examined carefully. If you find any quality problem, notify us as soon as possible please.

2. In order to serve you better, we are look forward to your idea and demand. If you have any idea about improving the product, please get in touch with us.
### Packing list

1. Heating system  
2. Module of mud cup  
3. 3.370 air supply pipe  
4. Temperature control  
5. Air supply device  
6. Back pressure device  
7. 150mm removable spanner  
8. 8-10 spanner  
9. 4# inner-hexagon spanner  
10. 20mL cylinder  
11. 988# filter paper  
12. M8×10 inner-hexagon screw  
13. φ63×3.1 “O”ring  
14. φ8×1.9 “O”ring  
15. φ6×1.9 “O”ring  
16. Communicating value rod  
17. Thermocouple  
18. Operating manual  
19. Certificate of competency

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<th>Item Description</th>
<th>Quantity</th>
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<td>Heating system</td>
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<tr>
<td>Module of mud cup</td>
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<tr>
<td>3.370 air supply pipe</td>
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<tr>
<td>Temperature control</td>
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