can be blended under the conditions of constant vacuum and constant high temperature.

[0006] To achieve the above object, the present invention provides a mini mixer system, the components of the mini mixer system including: a mixer, for performing a continuously mixing operation for an extended period of time, the mixer including a motor, a coupling ~~member~~ and torsion meter, a reduction gear, a plurality of coupling members, a frame group, a gear box group, at least one mixing element, a mixing can and a lifting mechanism group, wherein the motor, the coupling ~~member~~ and torsion meter and the reduction gear are connected to one another via the coupling members, the coupling member of the reduction gear is connected to the gear box group. The motor, the reduction gear, the gear box group and the lifting mechanism group are assembled and fixed on the frame group, the mixing element is assembled in a gear mechanism of the gear box group, the mixing can is placed on the lifting mechanism group and having a capacity of more than zero and less than one liter; an input/output (IO) unit, disposed in a control room, used as a remote control interface, being electrically connected to the mixer, the IO unit having control functions including mixer activation and deactivation function with mixer three-stage or multi-stage operating time and rotating speed setting function, total operating time

mixing element 35 is assembled in the gear box group 34, and the mixing can 36 is disposed on the lifting mechanism group 37.

[0037] Power transmission of the mixer 3 is powered by the motor 31 which is connected to the reduction gear 32 by a coupling ~~member~~ and torsion meter 38. The reduction gear 32 is connected to the gear box group 34 by a coupling member 39, and the mixing element 35 is assembled in a gear mechanism of the gear box group 34, thereby enabling the mixing element 35 to perform an expected movement by driving the motor 31.

[0038] As shown by an assembly diagram of the gear box group 34 and the mixing element 35 in FIG. 5, the mixer is a vertical satellite dual mixing blade mixer, and the two mixing blades are double eccentric. A view with respect to AA is as shown in FIG. 6, and the numerals 341, 342, 343, 344 and 345 represent a member 341 (internal ring gear), a member 342 (main shaft), a member 343 (idler wheel), a member 344 (fast blade gear) and a member 345 (slow blade gear), wherein the value in the bracket represents the number of teeth, and for example, 341 (75T) represents the member 341 is a gear having a number of teeth of 76. The member 341 is an internal ring gear of the frame, the input member (actuating member) is the member 342, the member 341 and the member 342 are adjacent to each other as a revolution

CLAIMS

What is claimed is:

1. A mini mixer system, comprising:

a mixer, for executing a continuous mixing operation for an extended period of time, wherein the mixer comprises a motor, a coupling ~~member~~ and torsion meter, a reduction gear, a plurality of coupling members, a frame group, a gear box group, at least one mixing element, a mixing can, and a lifting mechanism group, wherein the motor, the coupling ~~member~~ and torsion meter and the reduction gear are connected by the coupling members, the reduction gear is connected to the gear box group by the coupling member, the motor, the reduction gear, the gear box group and the lifting mechanism group are all fixed on the frame group, the mixing element is assembled in a gear mechanism of the gear box group, and the mixing can is placed on the lifting mechanism group, the mixing element comprises two mixing blades, a length ratio of ~~the~~ a top bearing to bottom of the blade comparing to ~~the~~ a waist bearing to the top bearing of the blade is 2.4 to 3.0, and a length ratio of the top bearing to ~~the~~ a shoulder of the blade comparing to the waist bearing to the top bearing of the blade is 1.5 to 2.0;

an input/output (IO) unit, disposed in a control room and serving as a remote

control interface, electrically connected to the mixer, the IO unit having control functions of mixer activation and deactivation function, mixer three-stage or multi-stage operation time and rotating speed setting function, total operation time display function, execution record window display function, setting detection of abnormal current and detection delay time function, real-time detected motor current display function, real-time motor rotating speed display function, real-time detected motor torsion display function, mixing can temperature display function, mixer overload reminder ~~(including sound)~~ function, an emergency stop switch, and abnormality detection description, wherein the mixer three-stage or multi-stage operation time and rotating speed setting function sets the motor of the mixer to perform a continuous stepped operation for a target time at a predetermined rotating speed; and

a powering and control unit, disposed near the mixer, electrically connected to the mixer and the IO unit, serving as a main power supply box of the mixer, and as an intermediary station of control signals and detection signals between the IO unit and the mixer.

2. The mini mixer system according to claim 1, wherein the IO unit, the powering and control unit and the mixer are connected by quick connectors in between so

as to quickly separate or assemble the IO unit, the powering and control unit and the mixer for functions of quick release, transportation and installation.

3. The mini mixer system according to claim 1, wherein the gear box group comprises a gear box body and a view window, an O ring is added between the gear box body and the view window, and the view window has a sealing vacuum degree of 10 torr and less and has a burst pressure relief function.

4. The mini mixer system according to claim 1, wherein the two mixing blades are a fast blade and a slow blade that perform a mutual mixing operation by rotation and revolution, a bearing length from ~~a~~ the bottom of the blade to a head of the blade is 200 mm to 240 mm, a shaft diameter of a blade shaft at a bearing is 16 mm to 22 mm, a bearing length from ~~a~~ the waist of the blade to the head of the blade is 70 mm to 95 mm, a bearing length from ~~a~~ the shoulder of the blade to the head of the blade is 150 mm to 170 mm.

5. The mini mixer system according to claim 1, further comprising:

a hot water circulation system, comprising an electric water heater, a water pump and a temperature sensor, being connected to the mixing can by a heat resistant water pipe and a quick connector;

wherein, a wall of the mixing can comprises a sandwich design which is in