

SHICO. TWO-COLOR WATER LEVEL GAUGES

MODEL : SRGG Series

■ FEATURE

- Distinct water level :

The water level is markedly distinct and confirmed from far distance since an illuminator is fitted at the rear of water level gauge by which visible surface is separated into two section, one is red(steam space), and another green(boiler space).

- Correct water level is indicated always :

As the Two-Color separation is based on the principle of optical science, normal water level can be indicated always even in an instantaneous variance of water level.

- Remote observation possible :

The water level appeared on the visible surface can be transferred to the operation(control) room by fitting several reflex mirrors(to the most convenient place for an operator to watch).

As the most improved method, television observation is utilized, therefore, we have also researched and developed those water level gauges suitable for television observation, and obtained good experimental result by change filter glass of two color(red and green) and employed in great numbers.

SRGG-L Type



Temperature : 270°C & Under
Pressure : 65Kg/cm²

SRGG-H Type



Temperature : 300°C & Under
Pressure : 1000Kg/cm²

SRGG-UH Type



Temperature : 374°C & Under
Pressure : 210Kg/cm²

The Level Confirmed

Steam Space - Red

Boiler Water - Green



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SHICO. TWO-COLOR WATER LEVEL GAUGES

MODEL : SRGG Series

■ Construction and Functioning

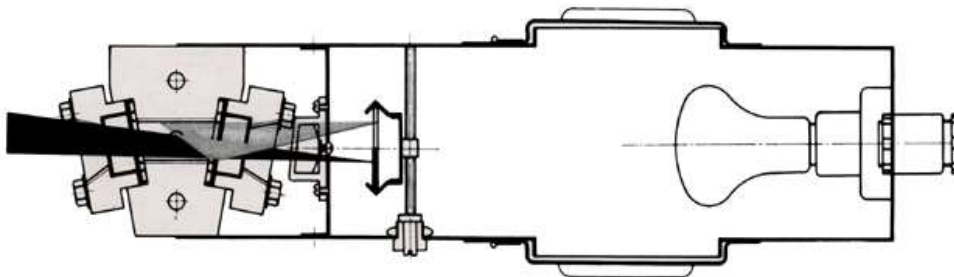
Two-Color water level gauge applies the principle of optical science that the reflective index of light is different when it passes through steam space and boiler water section, separating red(steam space) and green(boiler water section).

The gauge is of construction that a special lamp, colored glass plate (red, green) and a condensing lens are provided inside the illuminator installed at the rear of water level gauge. The light separated into two colors by passing through the colored plates (red, green) enters into visible window of water level gauge after travelling angle is changed a little by the next condensing lens. Then when the light passes through the trapezoid chamber which consists of two sheets gauge glass when it is steam blue light reflected in the chamber and does not appear outside interrupted by gauge cover and only red reflected ray appears on the visible face after passed through inside of water level gauge. And when it is boiler water in the chamber, contradictions phenomenon will occur, that is the red reflected ray does not appear outside interrupted and only green reflected ray appears on the visible face. As mentioned above, the filter glass, a condensing lens, gauge glass are combined in the optically position so that correct water level appear by instantaneously sensing the level variance.

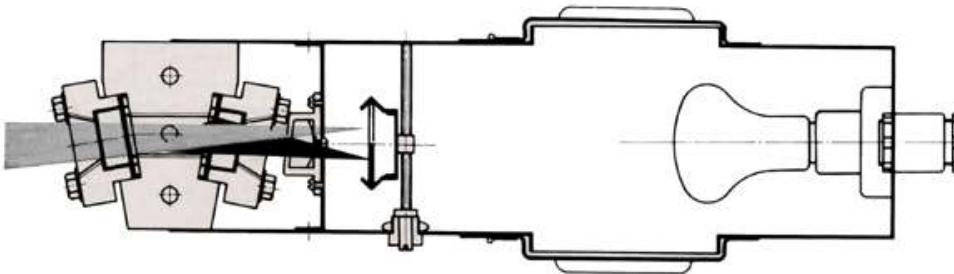
■ PRINCIPLE

※ This is designed on the basis of optical science 'When light passes through different materials its reflective index varies with material.'

In the case of steam



In the case of boiler water



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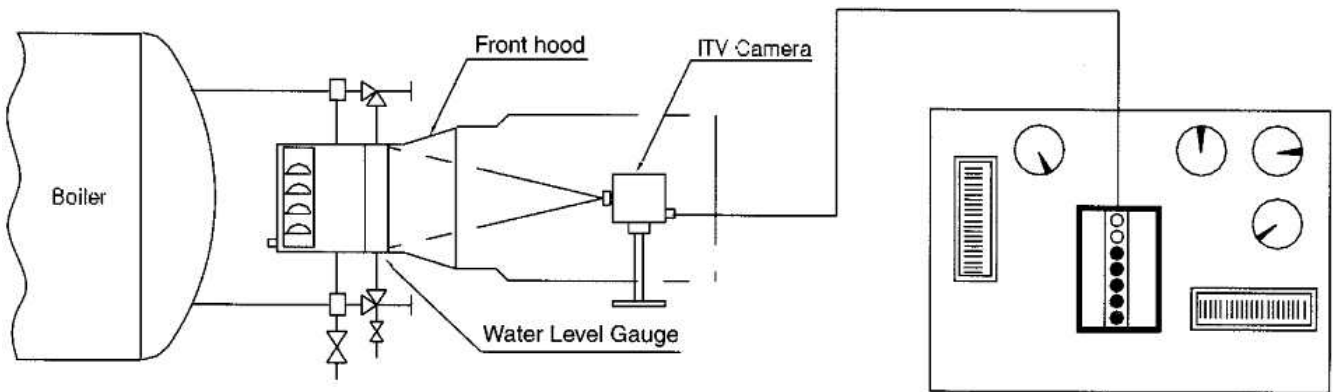
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■ OBSERVATION BY TELEVISION

Steam space appear white and section black.

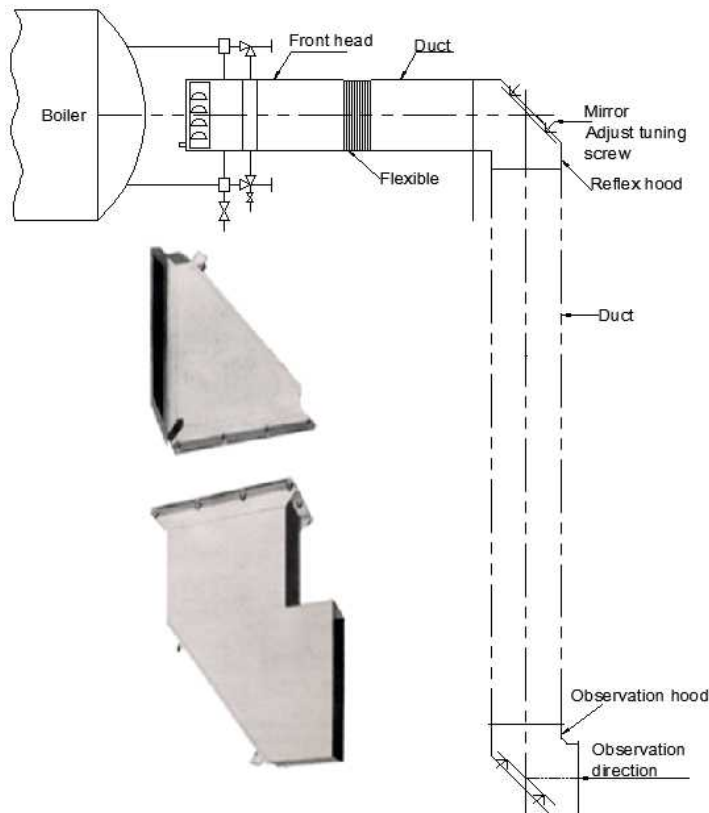
Filter is not red/green, so please specify clearly as 'Television Observation' without fail special color is used.



[Television Observation Device]

■ OBSERVATION BY REFLEX MIRROR

Several hoods with reflex mirror are attached, and observation is performed at the most convenient place by operators.



■ Illuminator for Two-Color type



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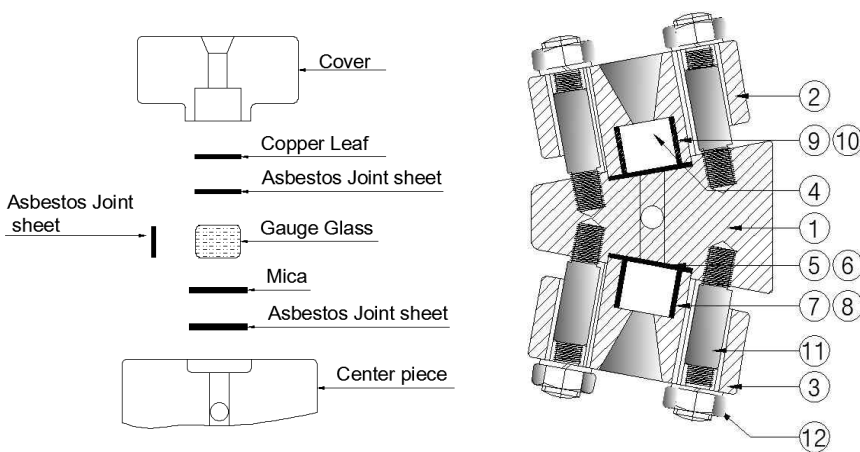
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■ SRGG-H Type

This water level gauge is of the most excellent construction and function as the two-color type gauge, especially has enjoyed great reputation for the ones installed on the boilers at the independent power generation plant or vessel.

■ Feature

- Ⓐ Only internal pressure is applied to gauge glass and tightening stainless is not applied
- Ⓑ Air tightness is maintained by tightening packing between cover and body, hence tightening is easy.
- Ⓒ For the reasons of above Ⓐ and Ⓑ, rupturing glass is decreased remarkably so that maintenance operation is decreased.

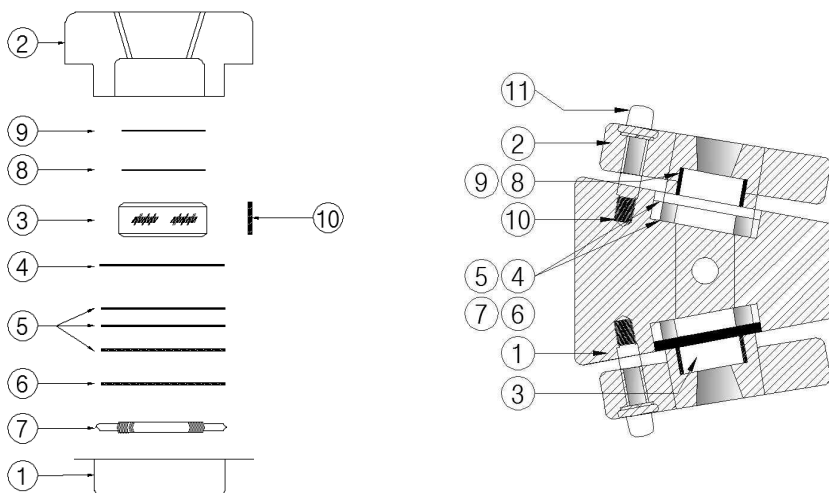


■ Part name

NO	DESCRIPTION
1	Center piece
2	Front cover
3	Rear cover
4	Gauge glass
5	Mica
6	Sheet packing
7	Sheet packing
8	Copper leaf
9	Side packing
10	End packing
11	Bolt
12	Nut

■ SRGG-UH Type

This gauge consists of seven (or five) partitioned water level visible windows of front and rear face to withstand high pressure and prevent gauge glass, mica, etc. from rupturing



■ Part name

NO	DESCRIPTION
1	Body
2	Cover
3	Gauge glass
4	Stainless leaf
5	Mica
6	Graphoil packing
7	Special tight-packing
8	Sheet packing
9	Stainless leaf
10	Side packing
11	Bolt



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