

FIG. 1

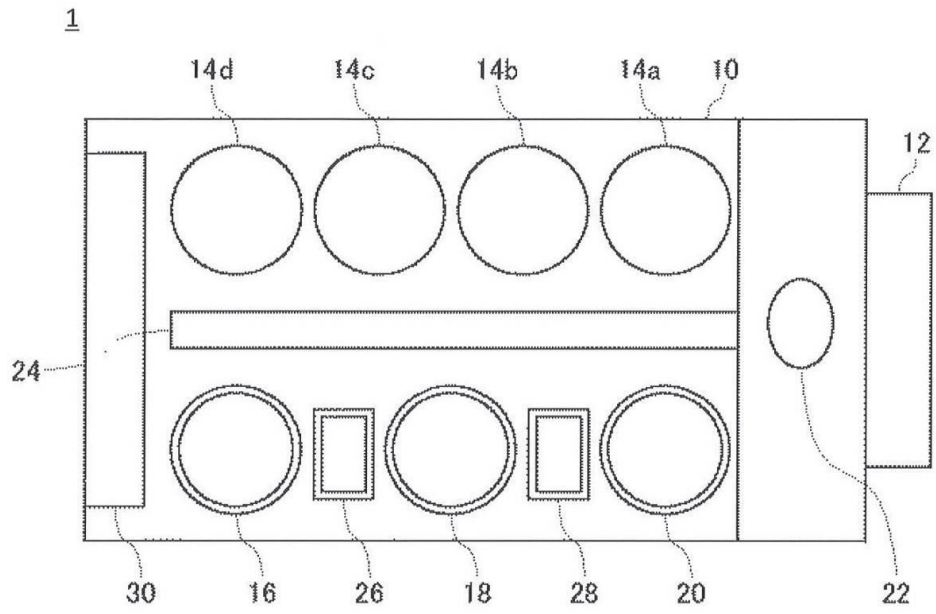


FIG. 2

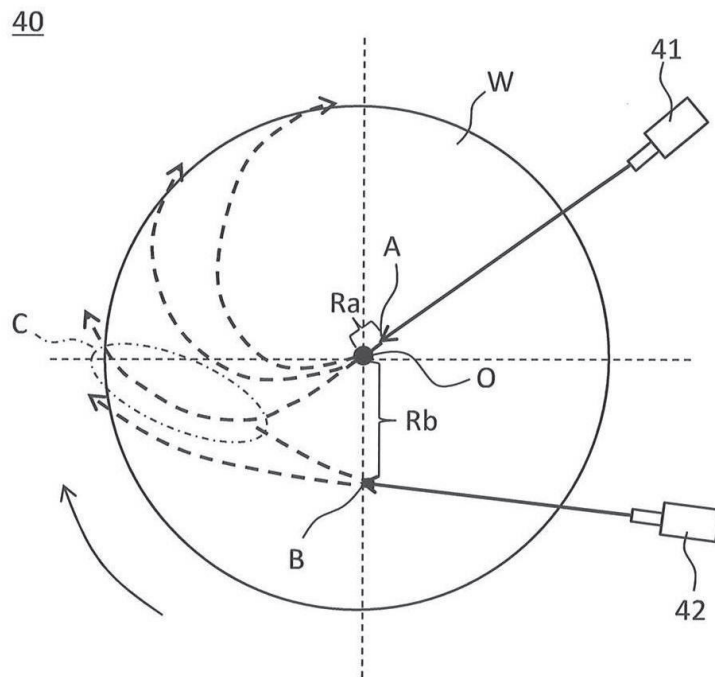


FIG. 3

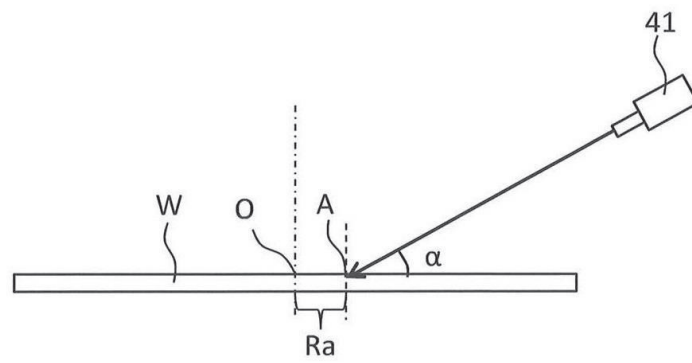


FIG. 4

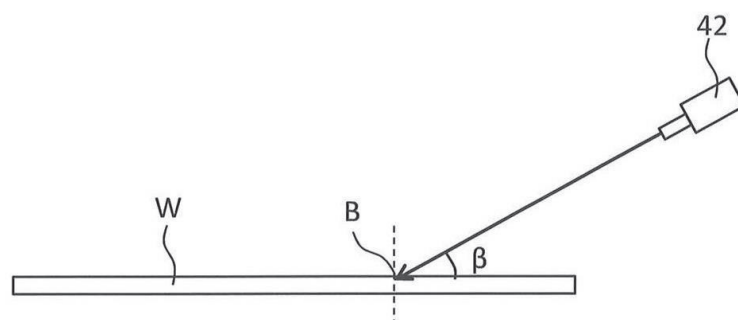


FIG. 5 <150rpm>

DIW flow rate: 1000ml/min

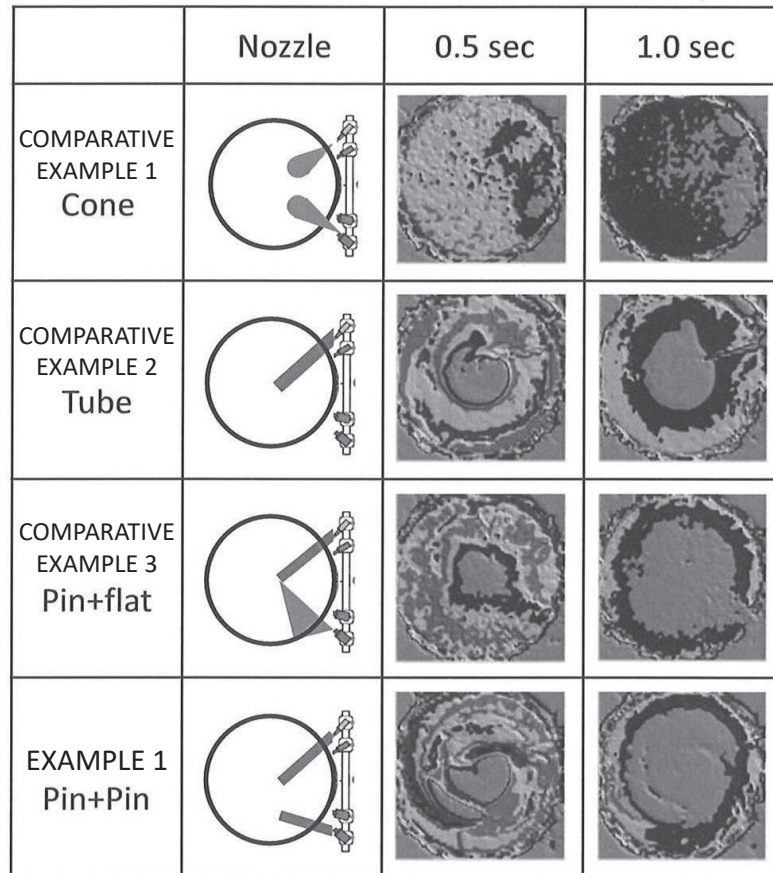
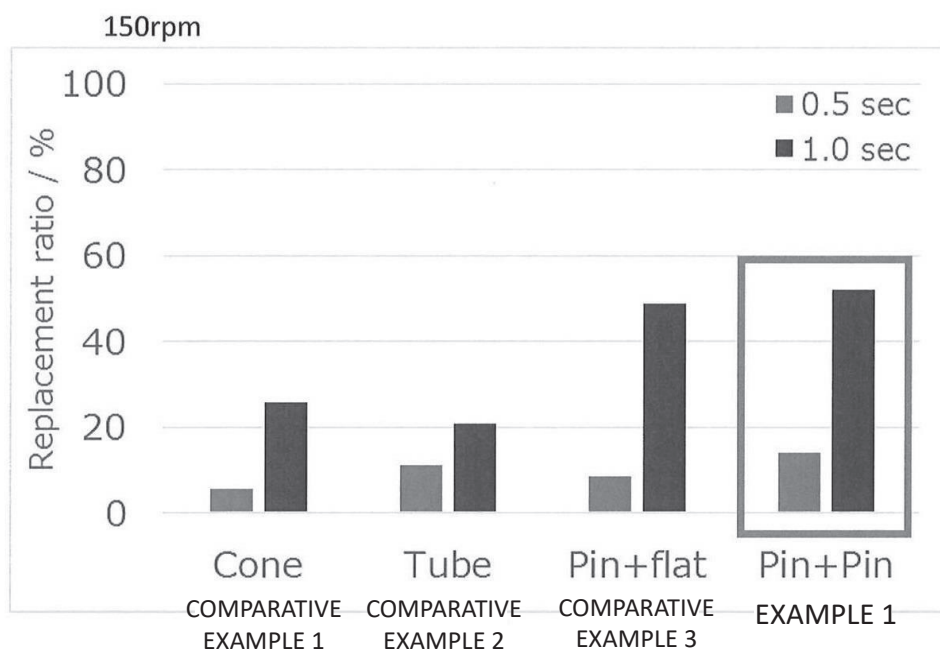
**FIG. 6**

FIG. 7

<400rpm>

DIW flow rate: 1000ml/min

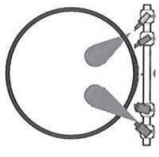
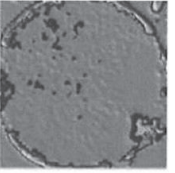
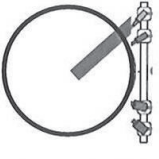
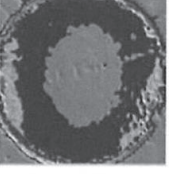
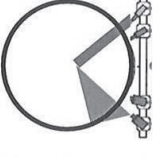
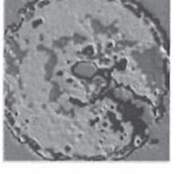
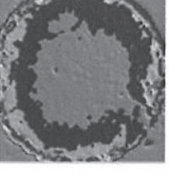
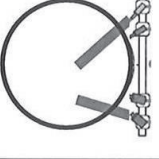
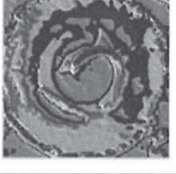
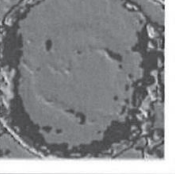
	Nozzle	0.5 sec	1.0 sec
COMPARATIVE EXAMPLE 1 Cone			
COMPARATIVE EXAMPLE 2 Tube			
COMPARATIVE EXAMPLE 3 Pin+flat			
EXAMPLE 1 Pin+Pin			

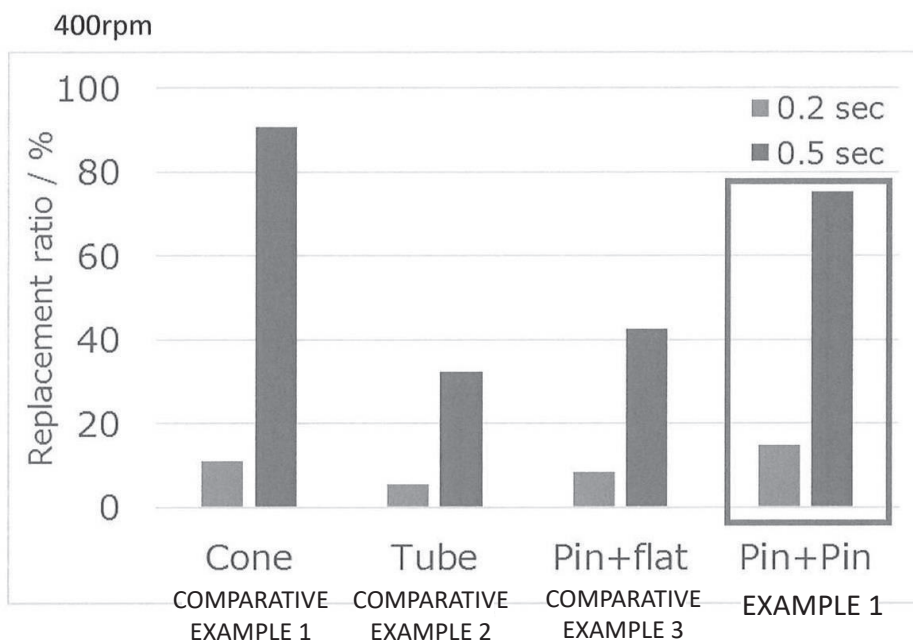
FIG. 8

FIG. 9

<150rpm>

DIW flow rate: 1000ml/min

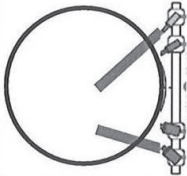
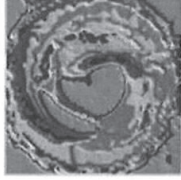
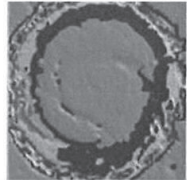
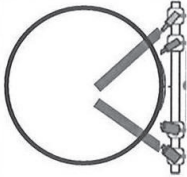
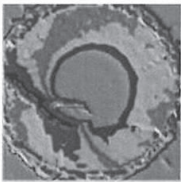
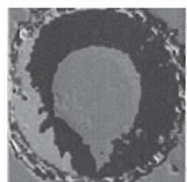
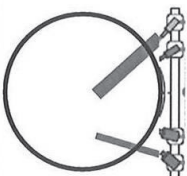
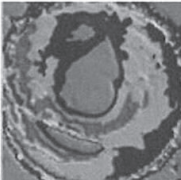
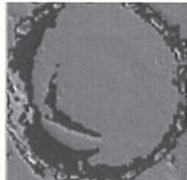
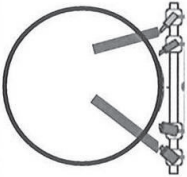
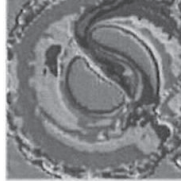
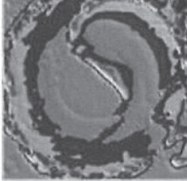
	nozzle	0.5 sec	1.0 sec
EXAMPLE 1 Center +middle			
COMPARATIVE EXAMPLE 4 center +center			
EXAMPLE 2 center(1.9Φ) +middle(1.0Φ)			
COMPARATIVE EXAMPLE 5 Center+middle (OPPOSITE DIRECTION OF ROTATION DIRECTION)			

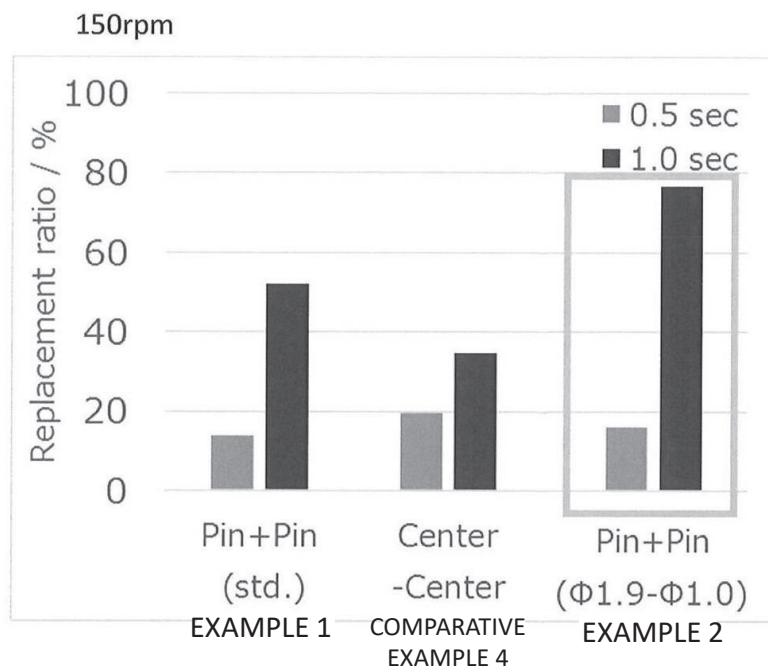
FIG. 10

FIG. 11

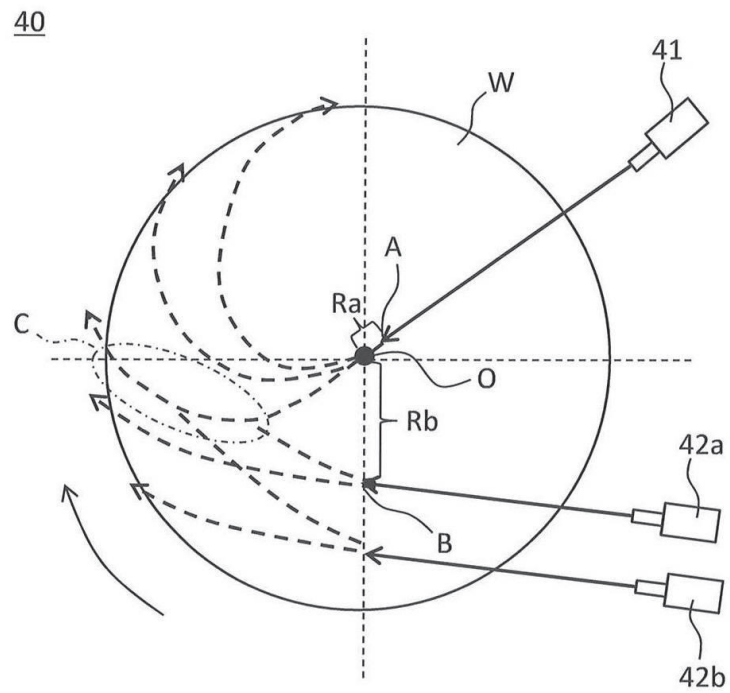


FIG. 12

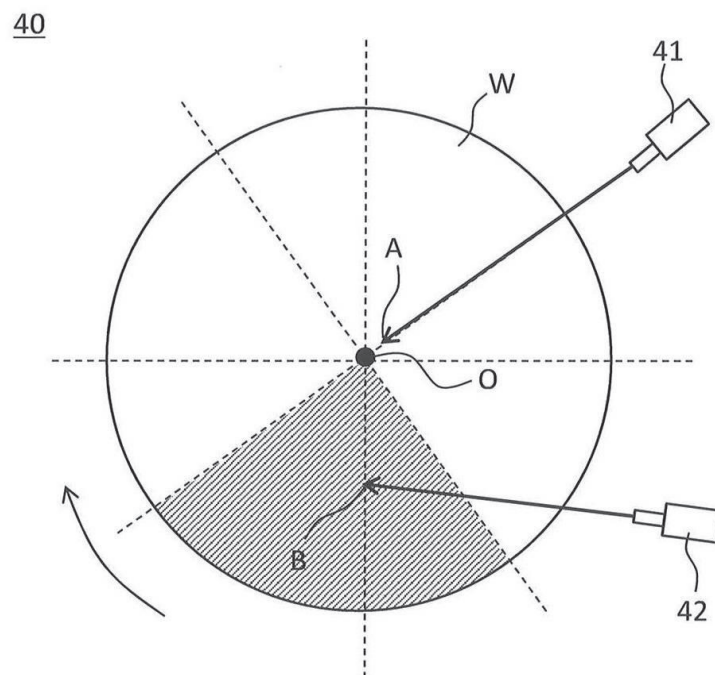


FIG. 13

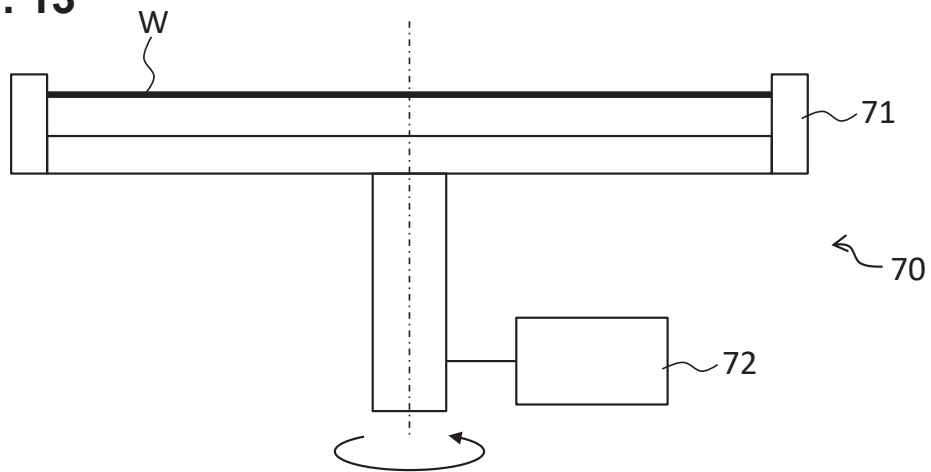


FIG. 14

