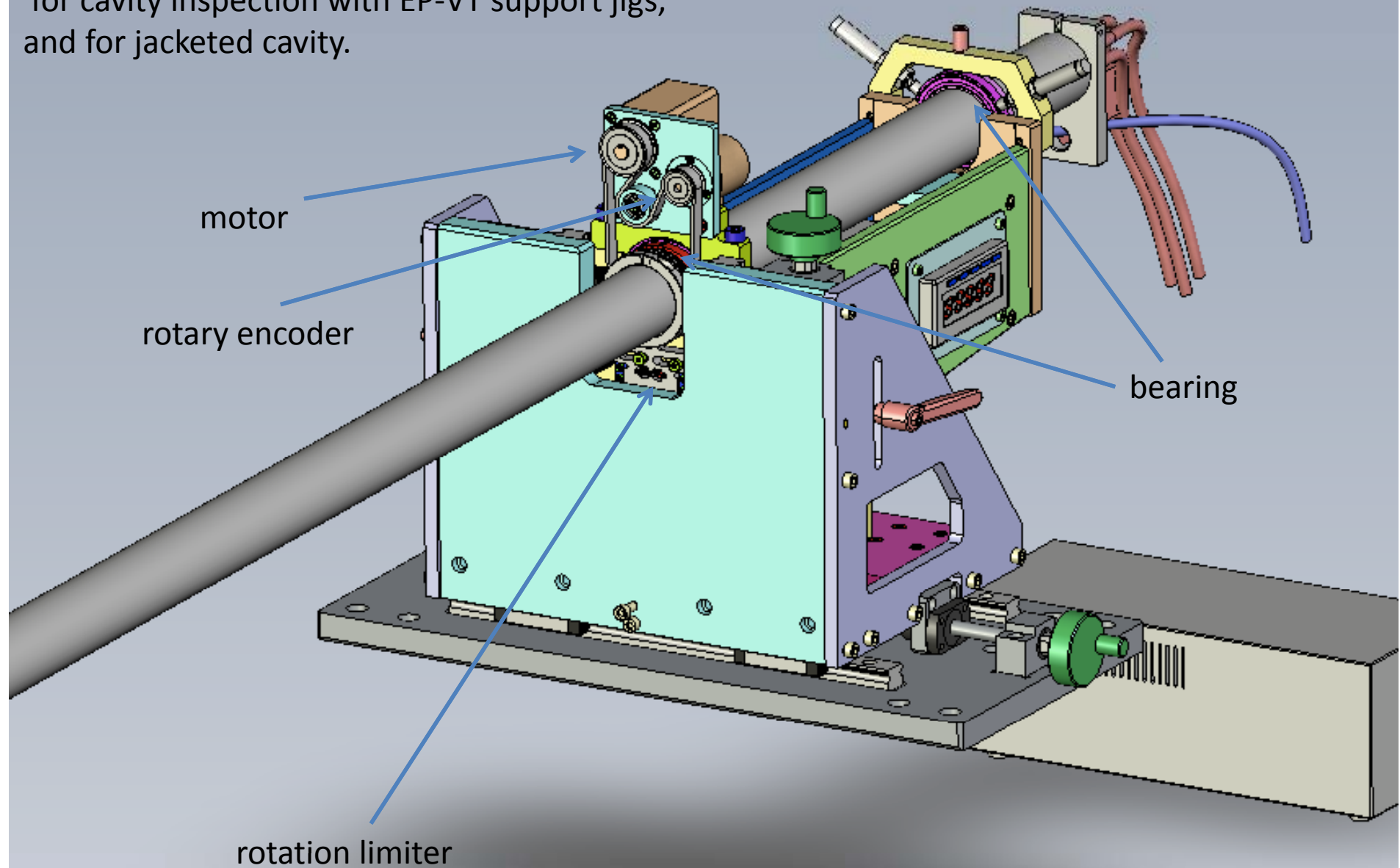


Kyoto camera upgrade

H. Hayano, 02242009

(Y. Iwashita, K. Watanabe, Y. Kikuchi)

Introduction of camera-cylinder rotation mechanism
for cavity inspection with EP-VT support jigs,
and for jacketed cavity.



Upgrade under fabrication

(1) CCD camera upgrade

from $5\mu\text{m}$ CCD pixel to $2.2\mu\text{m}$ CCD pixel camera.

(2) Lens upgrade

more magnification with more larger aperture.

(3) illumination upgrade

EL panel has limited life with more high voltage
(for more brightness).

-> LED + light guide with scattered surface (twice more light).

$\sim 7\mu\text{m}/\text{pixel} \rightarrow \text{targeting } 3.5 \mu\text{m}/\text{pixel}$

Image capture automation

- (1) control of cavity position
being done by VB application.
- (2) Image capture and automated file-save
already done by VB application.
(speed is enough fast, but must wait for vibration damping)
(automated focus is the next concern)
- (3) defect pattern matching
the software already fabricated in 2007 was tested
using recent high quality pictures.
-> no good results, so far.
(match to every bright traces, not suspected defects only)

Use for cavity fabrication

(1)EBW evaluation at dumbbell stage (for MHI-07, 08, 09)
small pits were found at around equator region before EBW.
(maybe they appeared after pressing)
scratches were found on EBW seam in dumbbell
caused by EBW clamp jig screws dismounting.
(We fed back to fabrication line people.)

(2)