



## 1. Detection of dents and bumps on metal punching strips

Dents and bumps on metal punching strips should be detected. For this purpose, a double contrast sensor type **SPECTRO-2-FIO-(VIS/VIS)/(VIS/VIS)** in connection with two optical fibers type **R-S-R2.1-(6x1)-1200-67°** is used. At this, the distance from the optical fiber frontend to the punching strips is approximately 7mm and the spot size at this distance is around 8mm x 2mm. Furthermore, the distance between the optical fiber frontends is roughly 15mm. The dents and bumps can be proper detected as shown in the screen shots.









