NXT Troubleshooting

1. Training designation

"Strategies for problem-solving at the NXT" – Error search & Troubleshooting

2. Training goals

The participants learn about:

- set-up and features of the machine
- software tools and their operation
- monitoring the state and response of sensors
- saving the correct log data
- error detection and prevention of machine down-time
- creating a data backup
- taking preventive measures to avoid machine down-time
- restoring machine condition /availability after data loss
- Strategies for failure analysis and their application
- Identification of external process influences and initiation of countermeasures
- Keeping production up and running – breakdown operation

3. Target group

The target group are employees of maintenance and troubleshooting teams, as well as process supervisors.
They are specialists (skilled workers, masters, technicians) who have been working in the SMD manufacturing sector for several years and are familiar with the production process and manufacturing machines in general.

The group is responsible:
- to maintain or repair the line equipment
- to train and supervise the operators
- to ensure the line availability and full running condition
- to improve the production process continuously
- to order spare parts, consumables and maintenance material

4. Methods

Lectures, joint discussions, workshop,
partner exercises, team work, case studies,
Skills are deepened with individual practice

5. Timeframe

The training takes 3 days, daily from 09:00 am to 04:00 pm

6. Training topics

What's inside? – units of the machine
- NXT – general overview
- NXT – module
- NXT – base

What's around?
- SW tools
- Accessory SW
- trace data
- Equipment Check
- CD1 (miscellaneous)

What's causing problems?
- main switch / fuses
- conveyor
- cable / plug connection
- safety circuit
- vacuum / Air
- CPU

Empty backup batteries – what to do?
- data backup
- module CPU
- base CPU
- servo X-axis
- servo placing head
- tray-unit

How to find errors?
- Strategies
- Troubleshooting (locate and eliminate errors)

Error inside....or in front?
- Ishikawa-Chart
- Process - machine: nozzle, feeders, part data
- Process - environment: humidity, electrostatics, packaging materials

Emergency plan
- What to do, if...