

Drafting a Quality and Process Control System for the AM Processes in DMRC



Michael Brand

Based on the available knowledge and results from the Year 2012 new approaches were initiated to optimize the processes available at the DMRC which should lead to better quality control methods. The aim was to avoid or minimize possible sources of failure which would lead to the crashing of jobs or part failure due to process problems. In the project “QM System for the additive processes installed at the DMRC” during the year 2014 following points were examined and developed:

- Analysis of order processing in DMRC
- Traceability of production orders
- Extending the DMRC QM Handbook on the basis of DIN 9001

Analysis of order processing in DMRC

The order processing includes all the administrative information right from the customer enquiry to the final invoicing. Fig 1 shows the actual process sequence in DMRC

Traceability of production orders

After the acceptance of the order it will be assigned to a suitable manufacturing process and a corresponding order number will be generated, see Fig 2: process traceability.

Then the order with the order number and other relevant information like customer data, address, processing status, date of possible delivery etc. will be entered in the order list.

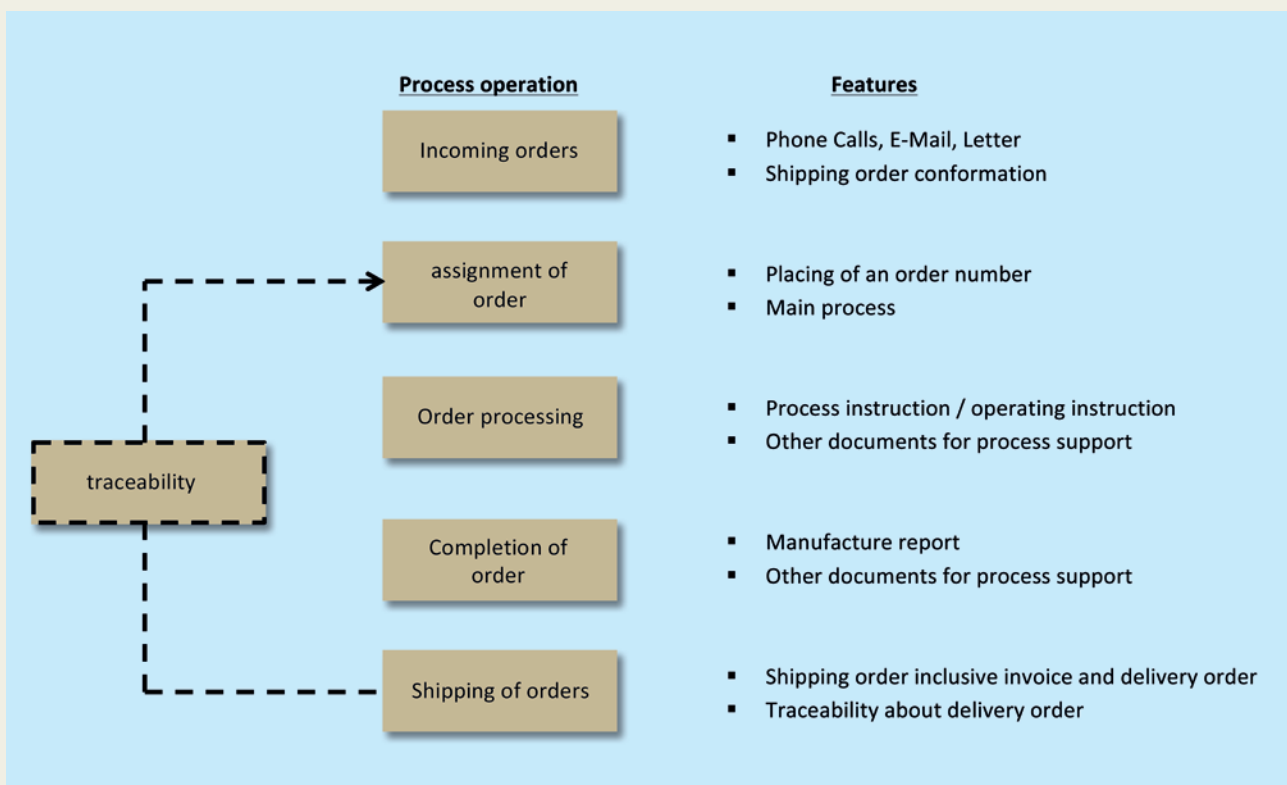


Fig 1: Actual process sequence in DMRC

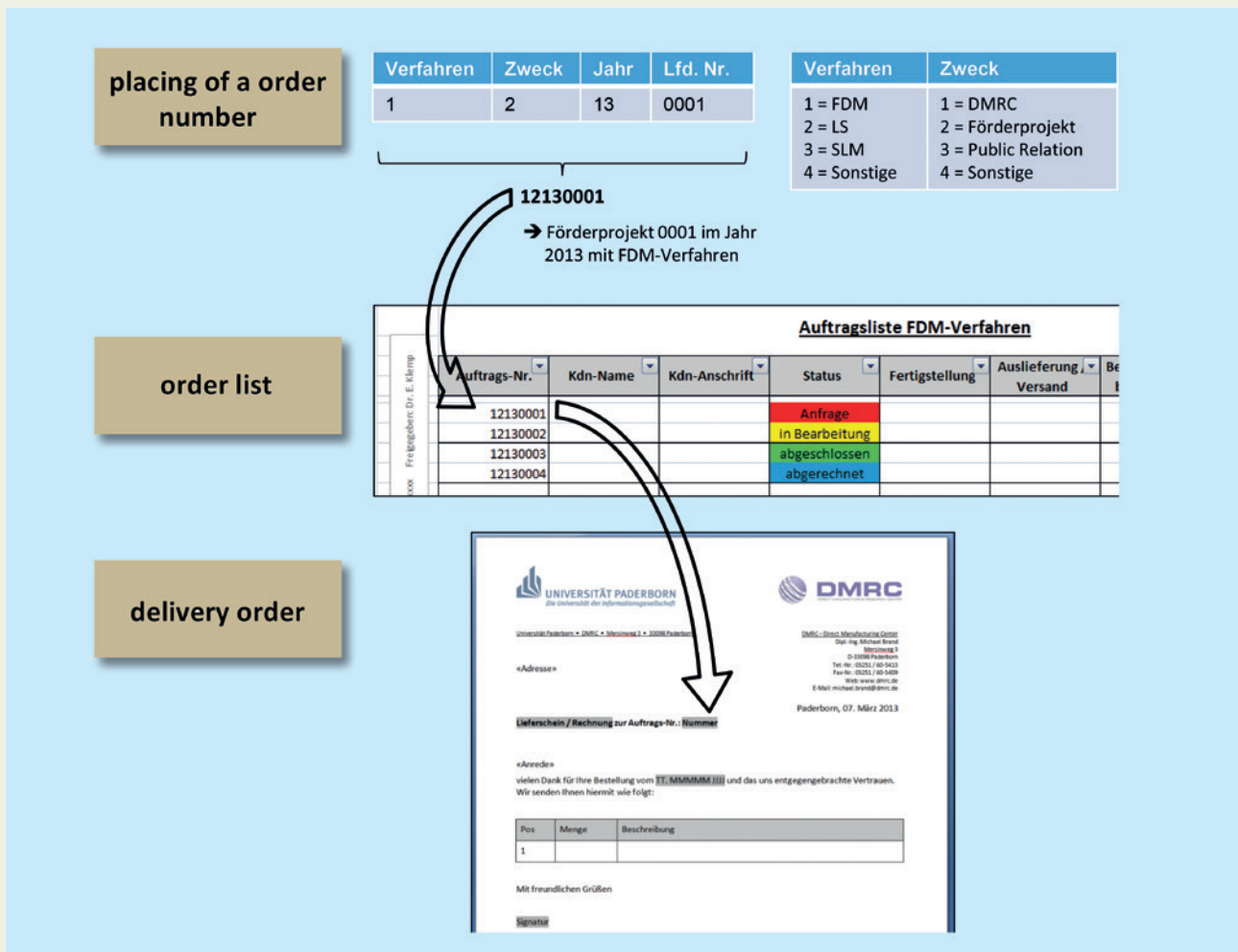


Fig 2: process traceability

The order list will be continuously updated during the whole process up to production. It is supposed to be a “living document”. The completed order will be sent together with the invoice and delivery note to the customer. In case of queries the affected order with its order number can be effectively traced in DMRC to check the manufacturing process.

DMRC QM Manual

The aim of the QM manual is to estab-

lish a QM management system which will help develop and if possible improve the quality standards at DMRC.

All measures taken will be documented in this QM manual.

This will describe the organizational and technical measures necessary to maintain the quality standards expected of DMRC as per DIN EN ISO 9001.

All changes and improvements effected in the year 2014 has been updated at the relevant places in the QM Manual.