

SDS

Segment Documentation System



Day by day, hundreds of segments are assembled all over the world to form small and large tunnel tubes. Besides the smooth running of the segment production process, the acquisition of production data is becoming more and more important. In close collaboration with Herrenknecht Formwork, VMT Process Technology has developed a simple and modular management system for data acquisition starting from simple technical data acquisition with hand-scanners down to extensive controlling systems for the entire segment production including warehousing, transport and procurement.



Features

- › Acquisition of production data, operation data, material movements as well as of rest and gestation periods
- › Factory View: Quality documentation, Reporting and statistics, Filing of data
- › Variable client-server structures

Advantages

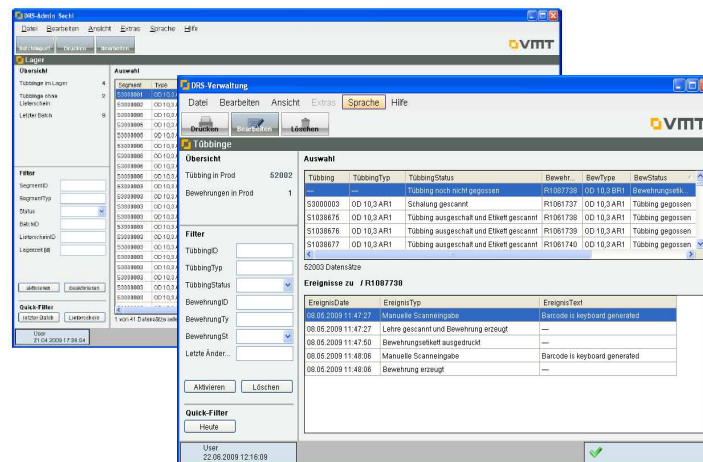
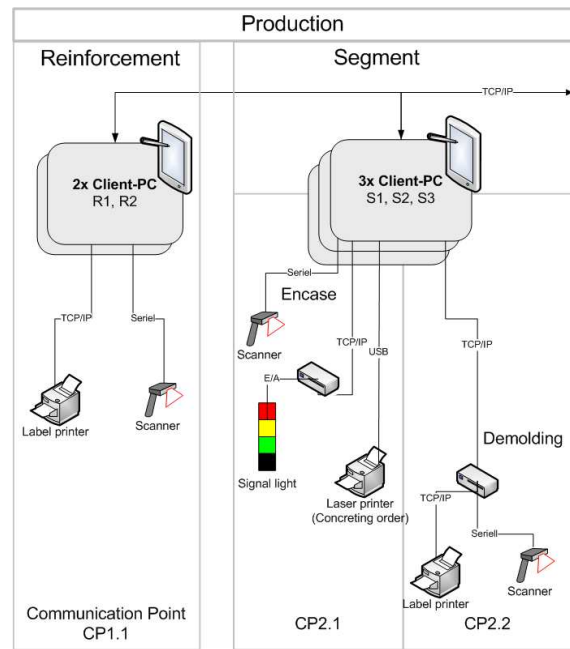
- › Quality assurance (receiving inspection, production and outgoing inspection, display of deviations)
- › Observance of times and deadlines
- › Transparency and security due to complete and clear-cut documentation of all manufacturing steps
- › Minimization of storage capacities
- › Modular design permits subsequent adaptation to the most different requirements

Production modul

This module is intended to collect all essential process data directly related to the production of a segment. The result is a complete documentation of the whole production process. Every handle and every process step is recorded by the system via sensors.

- › Reinforcement (Production, ID, Type)
- › Formwork (Type, ID)
- › Casting (Date, Charge)
- › Gestation time

The creation of labels for clear identification and further tracking of the products manufactured is supported by the system.

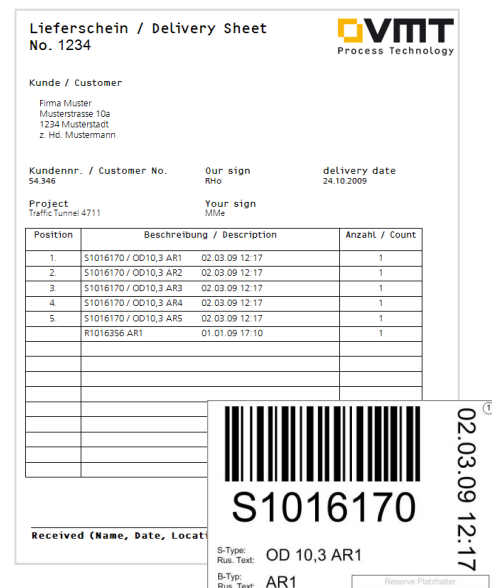


Logistics module

In addition to the production module, the logistics module links and extends the data hitherto recorded by index figures from transport

and warehousing. The database records the data concerning the storage times and the locations of the segments or their transport routes up to the tunnelling machine.

- › Stocking date and time
- › Type, ID
- › Storage location
- › Gestation time periode
- › Destocking date and time
- › Ship to location



Lieferschein / Delivery Sheet
No. 1234

Kunde / Customer: Firma Muster, Musterstrasse 10a, 1234 Musterstadt, z. Hc. Mustermann

Kundennr. / Customer No.: 54346 | Our sign: R10 | delivery date: 24.10.2009

Project: Traffic Tunnel 4711 | Your sign: M16

Position	Beschreibung / Description	Anzahl / Count
1.	S1016170 / OD10,3 AR1	02.03.09 12:17
2.	S1016170 / OD10,3 AR2	02.03.09 12:17
3.	S1016170 / OD10,3 AR3	02.03.09 12:17
4.	S1016170 / OD10,3 AR4	02.03.09 12:17
5.	S1016170 / OD10,3 AR5	02.03.09 12:17
	R1016356 AR1	01.01.09 17:10

Barcode: S1016170

Received (Name, Date, Locat):

S-Type: OD 10,3 AR1
Rus. Text: AR1

Reporting system

The data acquired from the production and logistics module can be evaluated in order to obtain the previously determined index figures for warehousing, production sequences or quality assurance. A documentation of the entire production cycle and further processing is thus ensured.

Storage 18.10.09								
Segment	Entry		On stock		Available		Output	
	Right	Left	Right	Left	Right	Left	Right	Left
A	15	12	110	80	16	20	14	12
B	15	12	123	75	15	23	14	12
C	15	12	89	102	14	31	14	12
D	14	9	95	74	15	17	14	12
E	14	13	107	80	17	21	14	12
F	14	12	102	79	15	5	14	13
K	14	11	99	83	16	19	14	12
Rings	14	9	89	74	14	5	14	12

Production information

Segment ID	Reinforcement	Produced	Time	Worker
S3000044	AR1	21.08.09	13:10	4711
	Formwork	Formwork ID		
	OD10,3 AR1	OD103AR1-87		
	Casting	Time	Worker	
	28.08.09	19:30	5321	
	Remove	Time	Worker	
	29.08.09	14:30	5321	

Segment ID	Storage location	Stocking	Time	Worker
S3000044	SL12	29.08.09	16:15	6312
	Finish	Time		
	29.09.09	16:15		
	Destocking	Time	Worker	Target
	30.09.2009	00.01.00	00:00	TR17

Product life cycle information

Optional expansion modules

With the help of the expansion modules, the system can be adapted to nearly every need. Thus, the system offers the possibility of an extension of the warehouse management by variable warehousing strategies (combination with ring management / route planning) or a combination with inventory control systems for mass comparison purposes (materials input ↔ product output) and the management of all existing documents. The necessary index figures and the representations can be made available to the user from a whole library of reporting functions.

- › Warehouse, resource and facility management
- › Control of production processes and logistic operations
- › Control of production and carousel systems
- › Ring management
- › Document management