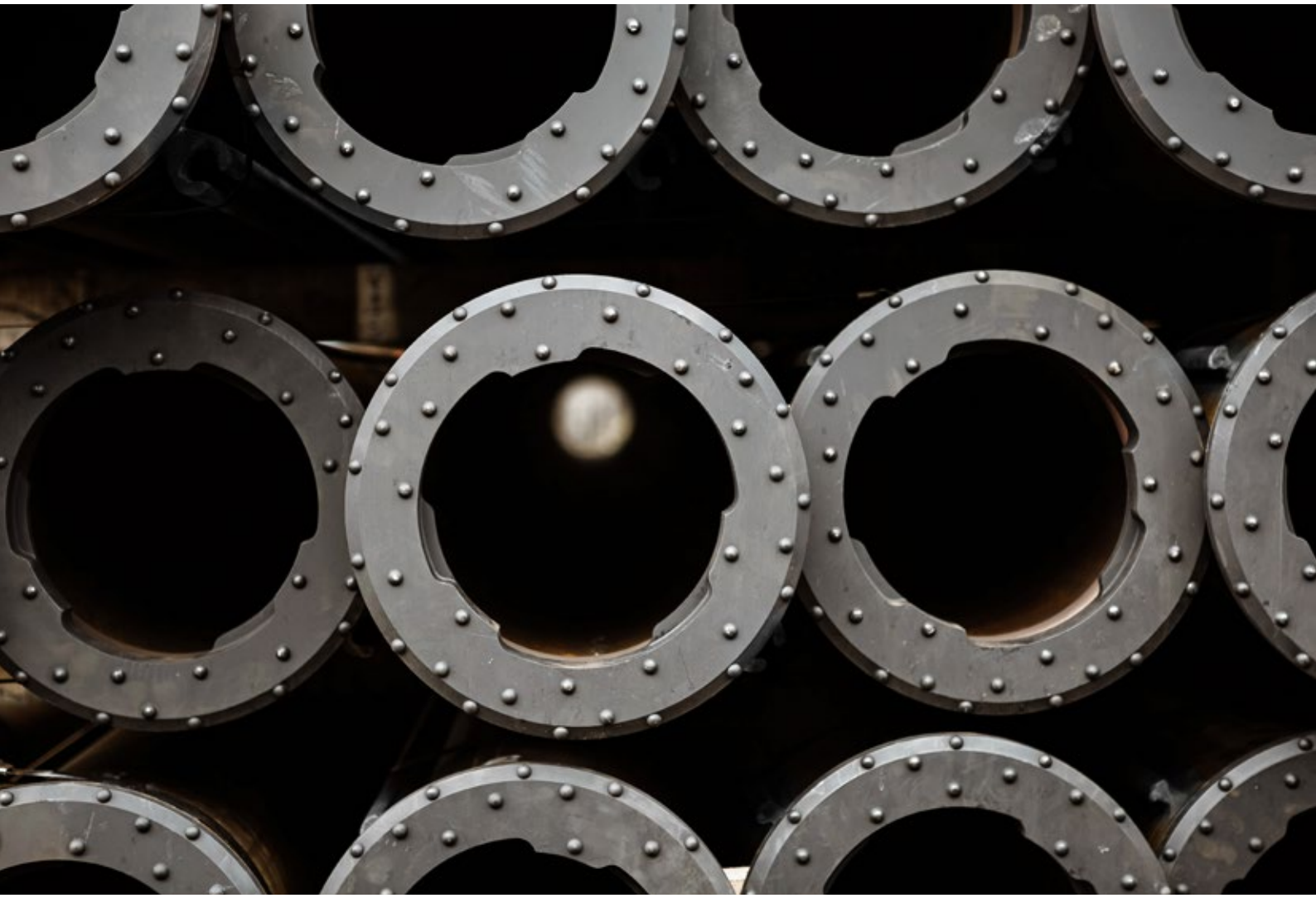
Ringset

Stockholding and welding of ringset

26.10.01



SCANDIA STEEL

PRODUCT NAME CHANGE

SSdr-Pålen® is changing its name to S-Drilled®.

The name change is part of Scandia Steel's product portfolio structure and has no impact on the product's design, technical performance, certifications, or field of application. During a transitional period, both names may appear in documentation, drawings, specifications, and certificates.
S-Drilled® corresponds to the product previously marketed as SSdr-Pålen®.

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DISCLAIMER

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Scandia Steel reserves the right to correct any printing errors. The information in this document may be changed without notice.

Stockholding and welding of ringset

By keeping ringsets in stock, we make the handling of the threaded S-Drilled® piles more efficient.

We also eliminate the quality problems that welding in the field can cause. Welding is performed in an industrial, controlled environment where complete quality documentation is already included upon delivery to the construction project.

We solve a logistics problem while delivering a complete pile.

By keeping stock for several drilling suppliers, we provide the customer with flexibility and reliable deliveries.

The focus can be placed entirely on foundation work.

Ringset suppliers

Geomek

TerraRoc

Robit®

Mincon™

Every welded steel structure shall be assigned to execution class EXC1-4, according to EN 1090.

Quality and efficiency

Ringset call-off

When ordering piles, the customer calls off ringsets from the drilling supplier. Scandia Steel registers the order and picks out ringsets for assembly.

The customer selects which execution class is to be delivered (EXC 2-4).

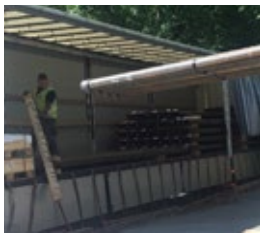
Welding in an industrial environment

Manufacturing is carried out in controlled and efficient production. Welding in an industrial environment eliminates quality problems that can arise when welding in the field.

Inspection according to EXC 2-4

Weld inspection is performed according to the customer's requirements in execution class EXC 2-4 by Scandia Steel or a third-party body.

Welding documentation, including inspection documentation, is delivered together with the other quality documentation when the pile is delivered.



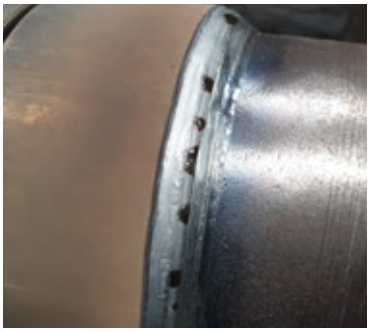
Delivery to site

Piles are delivered complete to the site. Prefabricated piles are particularly beneficial on cramped sites or in time-critical projects.

Quality work step by step

THE DRILLING SUPPLIER'S WELDING INSTRUCTIONS

We evaluate welding instructions and prepare our quality work.



pWPS

A preliminary welding procedure specification (pWPS) is prepared for each welding instruction, with selection of thickness ranges, diameter, welding wire, material grade and welding method.

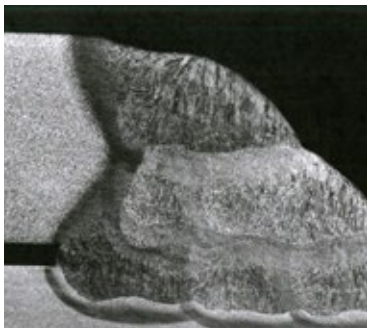
Welding test with third-party inspection

The pWPS is evaluated through destructive and non-destructive testing by a third party. The weld and the material are subjected to tests including tensile testing, impact testing and bending to ensure that the welding procedure dœs not have poorer properties than the base material. All our WPQRs are prepared under our own responsibility with review by a third-party body.

WPQR

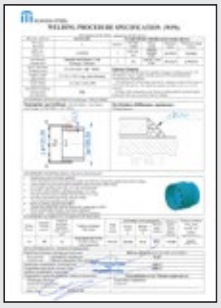
The test results are approved by a third-party body and a WPQR is issued in accordance with ISO 15614-1.

All our WPQRs are prepared under our own responsibility with review by a third-party body.



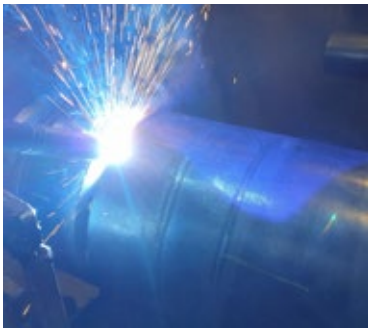
WPS

A welding procedure specification (WPS) is prepared according to ISO 15609-1 and refers to an approved WPQR and follows its range of qualification, so that quality assurance is maintained.



Manufacturing procedures

Assembly and welding of ringsets are covered by Scandia Steel's manufacturing procedures, with a strong focus on quality assurance in accordance with EN 1090-1.



Documentation

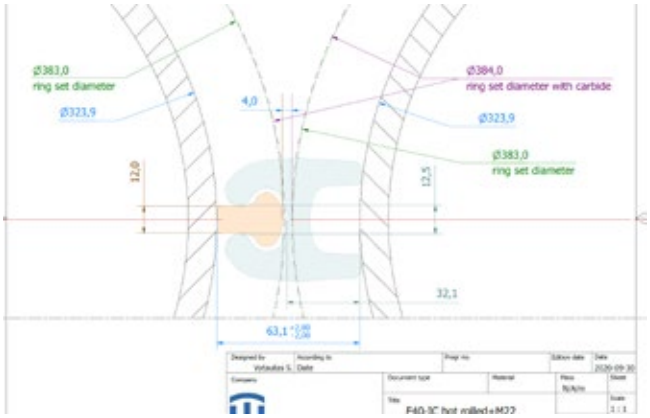
The welding work is documented and reported in accordance with certification rules and any customer requirements. Our reporting is based on the Swedish Pile Commission's recommendations for welding; Technical Memorandum 2:2018.

Ringset - A load-bearing part of the pile

COMPATIBILITY
The parts of the S-Drilled pile are covered by testing and certification through CE marking. Ensuring compatibility between pile and ringset against rock places high demands on the welding of the ringset.

OPTIMIZED PILE DRIVING
Increased welding requirements provide safer stress-wave measurement and more reliable verification of load-bearing capacity.

S-Wall® Drilled pilewall with correctly selected ringset



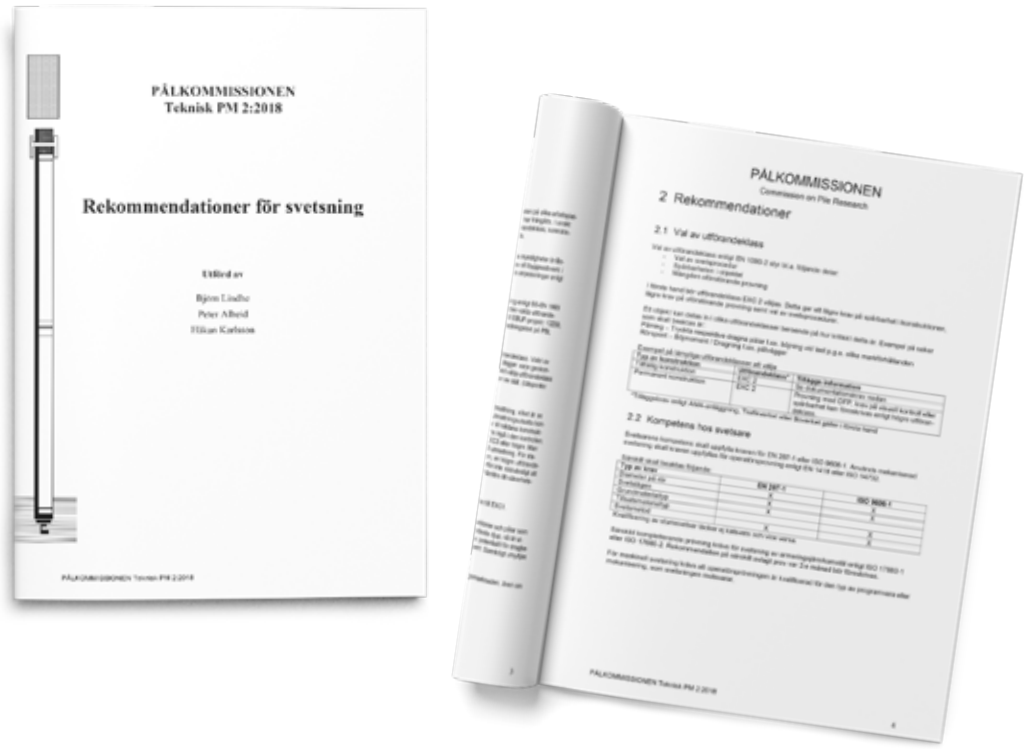
Welding of ringsets for S-Wall is subject to the same high requirements as Scandia Steel's other production.

Ringsets for a drilled pile sheet wall have an enlarged diameter to accommodate the interlock. Discuss with Scan-

Swedish Commission on Pile Research recommendations for welding

The Swedish Commission's on Pile Research (Pålkommissionen) Technical Memorandum 2:2018 was developed to help the industry correctly select execution class, inspection bodies, welding competence and welding procedures.

Consult Scandia Steel for correctly performed welding and correct documentation in each individual project.



Pile pipe dimensions

TABLE 1 PILE PIPE DIMENSIONS S-Drilled®							
S-Drilled®			SLEEVE	BUNDLE-SIZE	WEIGHTS OF PILES PER LENGTH EXCL. SLEEVE TOP PLATE AND RINGSET		
Diameter	Wall	Steel grade	Diameter	Pieces	3 m	6 m	12 m
114,3	6,3	S460MH/S550	127,0	2	50,4	100,8	201,6
114,3	8,0	S460MH/S550	127,0	2	63,0	126,0	252,0
139,7	8,0	S460MH/S550	152,4	2	78,0	156,0	312,0
139,7	10,0	S460MH/S550	152,4	2	96,0	192,0	384,0
168,3	10,0	S460MH/S550	182,0	2	117,0	234,0	468,0
168,3	12,5	S460MH/S550	182,0	2	144,0	288,0	576,0
219,1	10,0	S460MH/S550	235,0	2	154,8	309,6	619,2
219,1	12,5	S460MH/S550	235,0	2	191,1	382,2	764,4
273,0	10,0	S460MH/S550	292,0	2	194,7	389,4	778,8
273,0	12,5	S460MH/S550	292,0	2	240,9	481,8	963,6
323,9	10,0	S460MH/S550	343,0	2	232,2	464,4	928,8
323,9	12,5	S460MH/S550	343,0	2	288,0	576,0	1152,0
406,4	12,5	S460MH/S550	431,8	2	364,2	728,4	1456,8
508,0	12,5	S460MH/S550	546,0	2	458,3	916,5	1833,0
508,0	14,2	S460MH	546,0	2	519,0	1038,0	2076,0

Table 1. Scandia Steel's drilled steel pipe piles are available in the pipe dimensions shown above. The table also shows information about accessories for each dimension. Piles can be delivered with a bevelled end without these accessories.

TABLE 2 PILE PIPE DIMENSIONS S-Wall®							
WEIGHT PILE PIPE						WEIGHT INTERLOCK	
D	t	kg/m	3 m	6 m	12 m	Weights interlock kg/m	
[mm]	[mm]	kg	kg	kg	kg	Male	Female
219,1	10,0	51,6	154,8	309,6	619,2	3,5	14,0
219,1	12,5	63,7	191,1	382,2	764,4	3,5	14,0
273,0	10,0	64,9	194,7	389,4	778,8	3,5	14,0
273,0	12,5	80,3	240,9	481,8	963,6	3,5	14,0
323,9	10,0	77,4	232,2	464,4	928,8	3,5	14,0
323,9	12,5	96,0	288,0	576,0	1152,0	3,5	14,0
406,4	12,5	121,4	364,2	728,4	1456,8	3,5	14,0

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