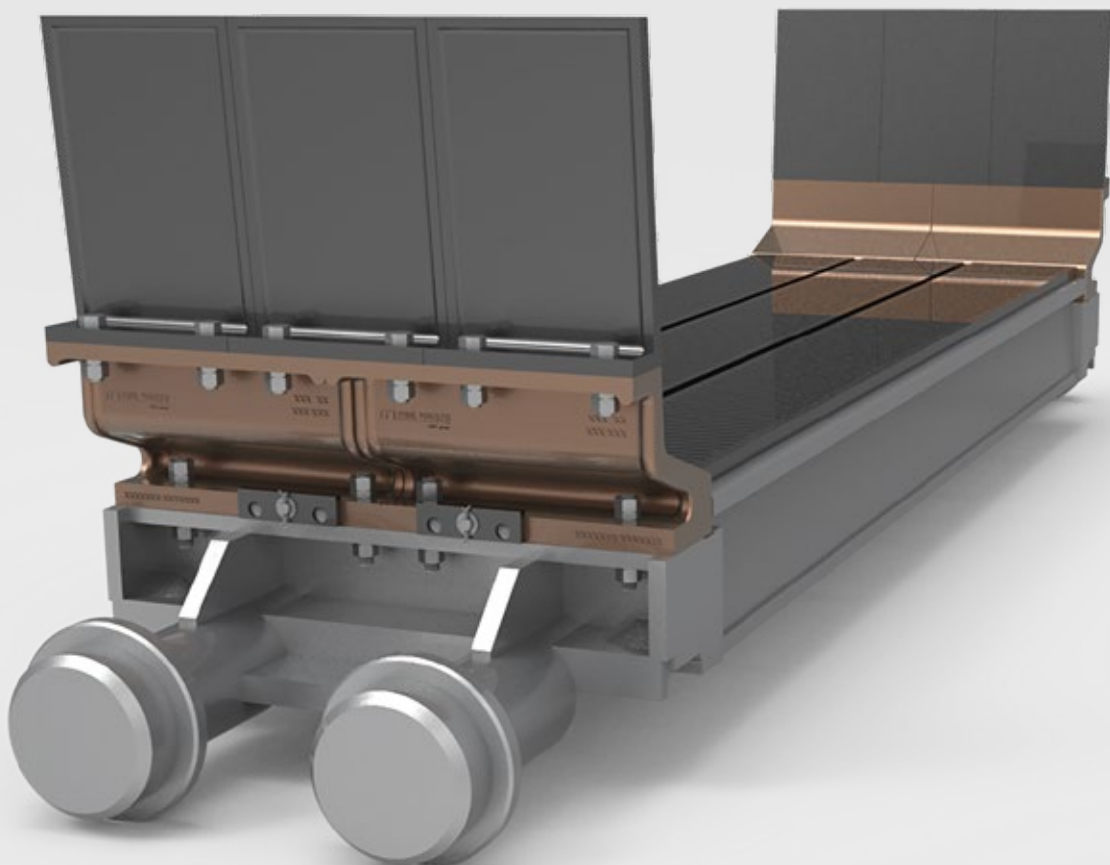


PAUL WURTH

SMS group

Pallet Car Widening

Sinter Technology



Pallet Car Widening

Sinter strand widening is a common solution to increase the capacity of existing sinter plants by offering following **benefits**:

- ▶ Minimum operational downtime (2 weeks);
- ▶ Capacity increase up to 15%;
- ▶ Quick return on investment.

The Paul Wurth solution (patent pending) consists in a new wall design, thus effectively solving some common concerns.

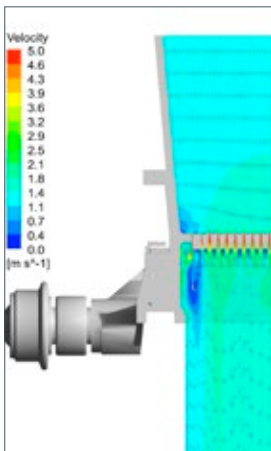
Our solution takes up mechanical challenges by:

- ▶ Reducing wear on grate bars and at discharge area;
- ▶ Lowering weight of pallet cars by avoiding additional parts and complex extensions;
- ▶ Avoiding failures of fastening solutions;
- ▶ Reducing pallet car maintenance requirements.

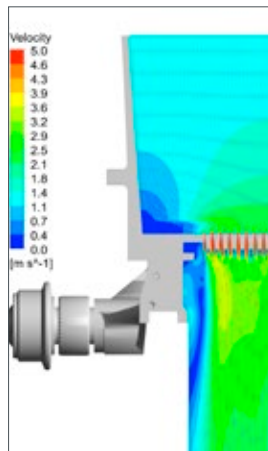
Our solution takes up process challenges by:

- ▶ Limiting dead zones at the extension areas in comparison to L-shape design (see pictures), thus
 - Avoid higher spillage production;
 - Ensure same ratio of return fines after the widening.

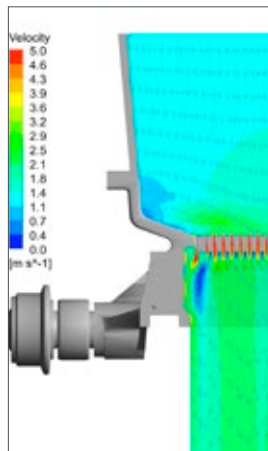
Original design



L-shape design



Paul Wurth design

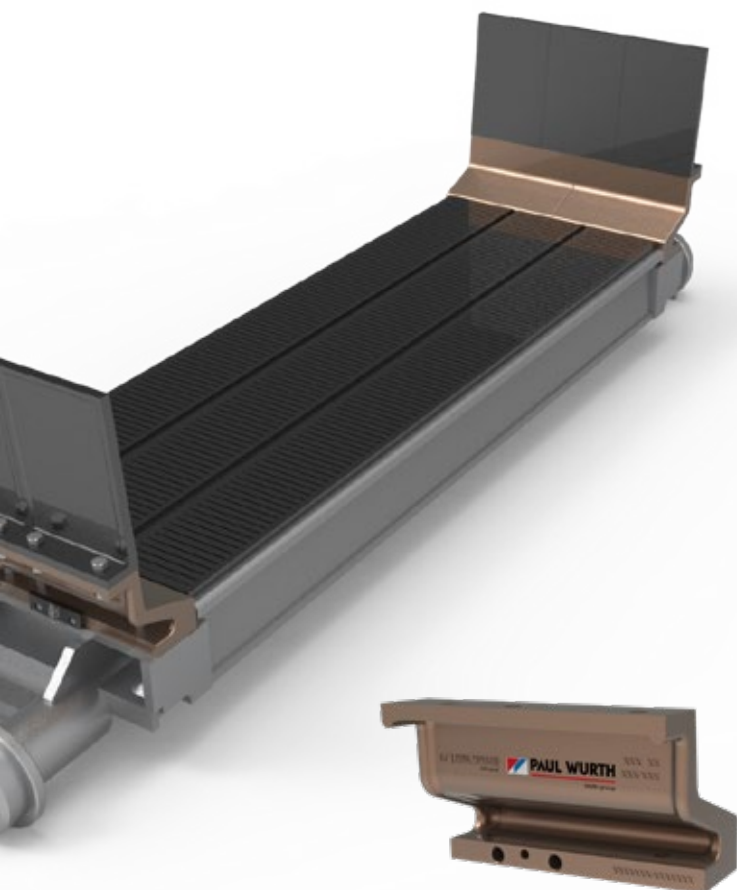


1. Paul Wurth widening in operation

2. Compare original design and Paul Wurth widening



Pallet Car connection type	L-Shape	Inclined	Paul Wurth
Horizontal			
Vertical			

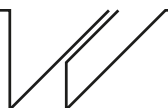


Key features, in comparison to L-shape:

- ▶ No additional wear parts;
- ▶ Grate bar holder out of reaction zone and maintainable from outside;
- ▶ Minimised dead zones;
- ▶ Improved air flow in pallet car rim zones;
- ▶ Increased reaction volume;
- ▶ No decrease in suction area.

Paul Wurth Implementation Services:

- ▶ Feasibility studies;
- ▶ Complete Engineering for revamp of feeding area, discharge area, ignition hood, pallet car;
- ▶ Equipment supply;
- ▶ Erection and commissioning services;
- ▶ Process support for post-widening operation (sinter machine and sinter cooler as well as up & downstream equipment).



Engineering & Technology worldwide

The Paul Wurth Group is today one of the world leaders in the design and supply of complete plants, systems and processes as well as specialised mechanical equipment for

■ **the iron & steel industry:**

Blast Furnaces & Auxiliary Plants
Coke Making Plants
Agglomeration Plants
Direct Reduction Plants
Environmental Protection, Recycling & Energy-Saving Technologies

■ **other industries:**

Valve Solutions for Oil & Gas Downstream Processes
Solutions for Decentralised Energy Production
Intralogistics Solutions for Heavy Loads
Engineering & Project Management for Civil Construction and Infrastructure Projects

Feasibility Studies – Conceptual, Basic and Detail Engineering – Project Management – Plant and Components Supply – Turnkey Projects – Digital Solutions – Assistance in Plant Assembly and Commissioning – Technology and Operations Consultancy – On-site and Remote Operational Assistance – After-sales Services

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PAUL WURTH

SMS group

EUROPE

Paul Wurth S.A.

Luxembourg, LUXEMBOURG
Phone: (+352) 4970-1
paulwurth@paulwurth.com

Paul Wurth Italia S.p.A.

Genoa, ITALY
Phone: (+39) 010 640 91
pwit@paulwurth.com

Paul Wurth Deutschland GmbH

Essen, GERMANY
Phone: (+49) 201 245300
pwdeutschland@paulwurth.com

Mainz-Kastel, GERMANY

Phone: (+49) 6134 606 6
pwdeutschland@paulwurth.com

Mönchengladbach, GERMANY

Phone: (+49) 2161 4785824
oil-gas@paulwurth.com

Paul Wurth, a.s.

Ostrava, CZECH REPUBLIC
Phone: (+420) 595 155 100
pwcz@paulwurth.com

Paul Wurth Moscow Representation Office

Moscow, RUSSIA
Phone: (+7) 495 721 1553
pwmoscow@paulwurth.com

Paul Wurth Kovrov

Kovrov, Vladimir region, RUSSIA
Phone: (+7) 49232 97099
pwkovrov@paulwurth.com

Paul Wurth Metallurgical Services LLC

Chelyabinsk, RUSSIA
Phone: (+7) 351 799 60 60
pwms@paulwurth.com

Paul Wurth Ukraine Representation Office

Mariupol, UKRAINE
Phone: (+380) 629 41 18 99
pwua@paulwurth.com

Paul Wurth International Site Services S.r.l

Genoa, ITALY
Phone: (+39) 010 640 9700
pwis@is.paulwurth.com

Paul Wurth Energy S.r.l

Carpnedolo, ITALY
Phone: (+39) 030 9697 555
pwenergy@paulwurth.com

Joint company of
Dango & Dienenthal and
Paul Wurth:

TMT – Tapping Measuring Technology
Luxembourg, LUXEMBOURG
Phone: (+352) 261920 0
contact@tmt.com •
www.tmt.com

Siegen, GERMANY
Phone: (+49) 271 4014 0
contact@tmt.com •
www.tmt.com

Joint Company of
SAB and Paul Wurth:

VCL – Valve Competence Luxembourg
Grevenmacher, LUXEMBOURG
Phone: (+352) 27 68 54
info@vcl.lu • www.vcl.lu

CTI Systems S.à.r.l.
Lentzweiler, LUXEMBOURG
Phone: (+352) 2685 2000
cti@ctisystems.com
www.ctisystems.com

AMERICAS

Paul Wurth Inc.
Valparaiso, Indiana, USA
Phone: (+1) 218 850 1290
pwus@paulwurth.com

Paul Wurth do Brasil

Belo Horizonte, M.G., BRAZIL
Phone: (+55) 31 3228 2800
pwbr@paulwurth.com

Paul Wurth do Brasil Montagens e Manutenção Ltda
Vespasiano, M.G., BRAZIL
Phone: (+55) 31 3228 2799
pwbrm@paulwurth.com

Paul Wurth de Mexico SA de CV
Atizapan, MEXICO
Phone: (+52) 55 1106 3463
pwmex@paulwurth.com

ASIA

Paul Wurth Metal Technology (Beijing) Co., Ltd
Beijing, CHINA
Phone: (+86) 10 8405 4400
pwbeijing@paulwurth.com

Beijing Paul Wurth Trading Co., Ltd

Beijing, CHINA
Phone: (+86) 10 8405 4699
china.trading@paulwurth.com

Shanghai Paul Wurth Metallurgical Equipment Manufacture Co., Ltd

Shanghai, CHINA
Phone: (+86) 21 61186300
pwshanghai@paulwurth.com

Paul Wurth India Pvt. Ltd

Gurgaon, INDIA
Phone: (+91) 124 4523200
pwindia@paulwurth.com

Paul Wurth International S.A. Taiwan Branch

Kaohsiung, TAIWAN
Phone: (+886) 7 33 93 309
pwtaiwan@paulwurth.com

Paul Wurth International S.A. Korea Branch

Seoul, KOREA
Phone: (+82) 2 553 9450
pwkorea@paulwurth.com

Paul Wurth Vietnam Co., Ltd

Ho Chi Minh City, VIETNAM
Phone: (+84) 8 73 000 514
pwwietnam@paulwurth.com

Joint company of
IHI Corporation and Paul Wurth:

PAUL WURTH IHI Co., Ltd.

Tokyo, JAPAN
Phone: (+81) 3 6630 4785
contact@ihi-pw.jp