2012-05-14

Product Information (English and Chinese)

Simpler, Cleaner, Safer.

SCHMID's new Version of the Revolutionary Wafer Pre-Cleaning System sets the Benchmark even higher

- Very good cleaning results reduce the effort of subsequent processes.
- The simplified design cuts operating costs even further and reduces wear.
- Successful cleaning of diamond wire cut wafers.

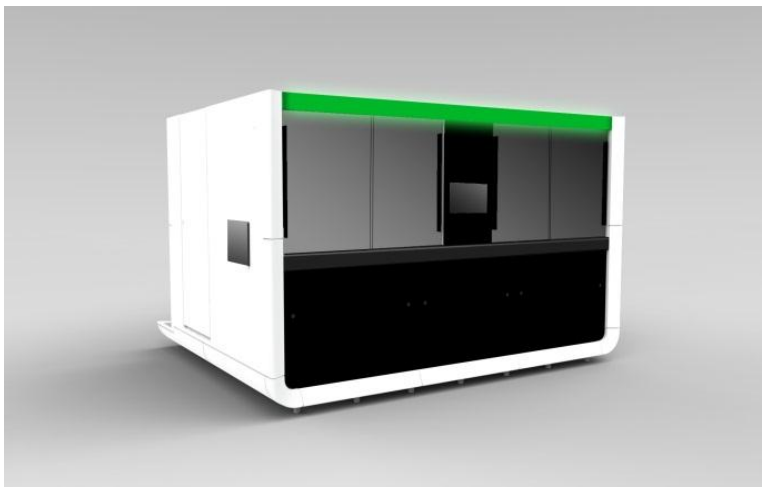

Fig. 1: Wafer PreCleaning and Degluing System (design study for SNEC Shanghai)

High cleaning efficiency at low operating costs – that is the current challenge for the cleaning of wafers after the sawing process. Thanks to its simplified design and new transport system, the SCHMID's PreCleaning and Degluing System meets all requirements with less and less effort: consumption and operating costs have been fallen, wear and maintenance work have been reduced and the downstream processes facilitated.

So it is only appropriate that the system shows up as an appealing design study at the SNEC.

And underneath the design, further highlights come to light: thanks to the new gondola-style transport system, all moving parts are outside the dirt area, which means less wear and maintenance work. Every hour four carriers are transported vibration-free through the system by a toothed wheel drive.

Fig. 2: Lance system

The revolutionary lance-type system remains the guarantor for the excellent cleaning results by rinsing the entire area of the cutting surfaces of each individual wafer through the sawn channels of the sawing beam. The precisely targeted water stream caters for minimum water consumption, and the low water pressure is gentle on the sensitive work pieces. This results in an extremely low breakage rate, which SCHMID guarantees its customers.

A metal-ion contamination of the wafers through the system can be ruled out because all parts contacting the wafers as well as all processing areas, piping and tanks are made of plastic.

The degluing step takes place in an immersion tank containing a watery acid solution into which the carrier is lowered pneumatically. Here the media circulation ensures low chemistry consumption. A subsequent rinsing process removes the degluing medium from the wafer.

"The real advantage of clean wafers is still underestimated" maintains Product Manager Christoph Jansen . "Already at degluing, efficient pre-cleaned wafers help to reduce the chemistry requirement. And the fully automatic singulation systems which are being requested more and more by customers, reward clean wafers with low wear and low consumption costs. And best of all: we can shorten the final wafer cleaning system by almost half, when our efficient PreCleaning System is used."

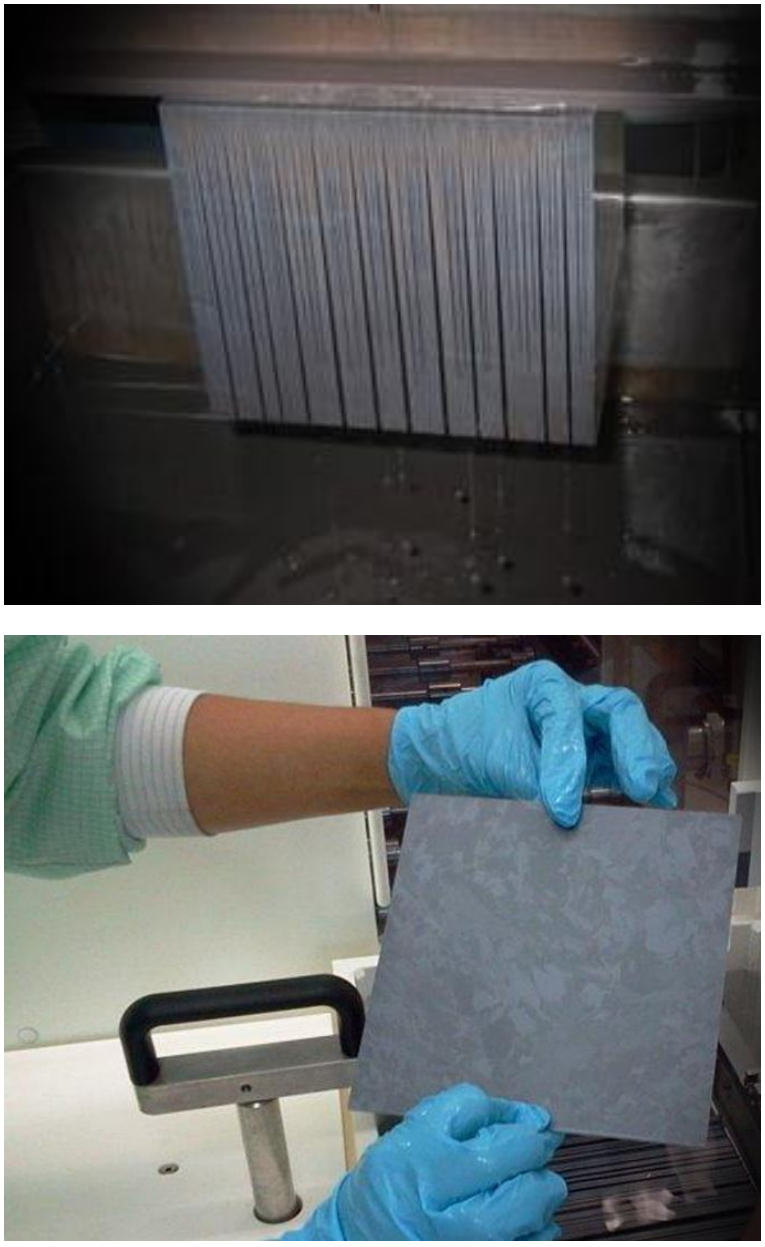

Fig. 3: Wafer before and after the all-over cleaning

By consequently implementing the function-orientated design of the PreCleaning and Degluing System, the SCHMID Group secures the continued success of this innovative system on the market. From the previous model a production capacity of 600 MWp has already been installed in the Asian sector for the pre-cleaning of wafers cut by diamond wire.

About SCHMID Group

The SCHMID Group provides highly efficient system and process solutions for the entire solar wafers, cells and modules supply chain. Starting with the single machine right up to the turnkey factory, including guaranteed performance parameters, such as production capacity and degree of efficiency. Innovative process technologies are developed at their won technology centers in partnership with universities and research facilities and are made ready for the market.

SCHMID welcomes you to the SNEC: 16th- 18th May 2012 in the E5 halls, Stand 560. Here a PreCleaning System and a Metrology Sorter System from the Wafer business unit will be exhibited.

Characters of main text (including spaces): 3039

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2012-05-14

Product Information

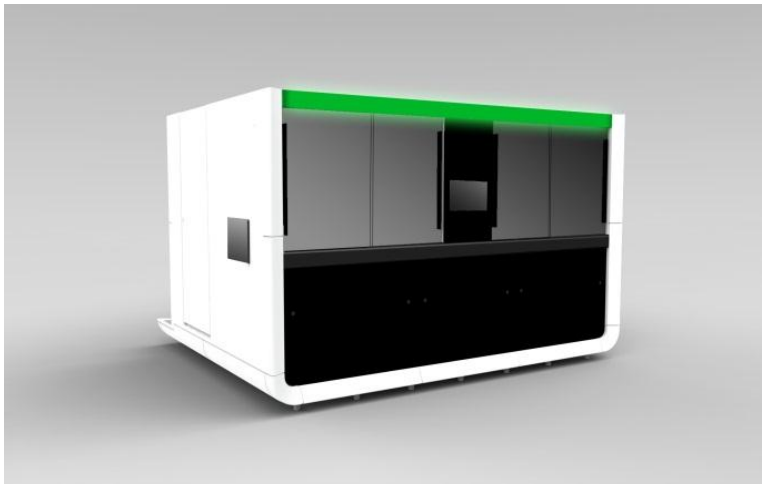
简单，清洁，安全

施密德新型革命性晶片预清洁系统让标准变得更高

优异的清洁效果，减少后续程序。

精简化设计进一步降低运行成本，节约用水。

可成功清洗金刚石拉丝切割晶片。



图三：晶片预清洁及除胶系统（上海SNEC专属设计研究）

高效清洁，低运行成本——这是目前切割工序后清洗晶片的难题。得益于其精简化的设计和新型运输系统，施密德集团预清洁及除胶系统可以轻易地达到所有的要求：降低消耗及运行成本，降低损耗及维修成本，优化下游工序。

只可以说，该系统在SNEC上的亮相必定引人注目。

在这种设计下，精彩继续呈现：得益于新型吊舱型运输系统，所有可移动的部分都可以与粉尘区域隔离，这意味着损耗及维修成本可以降低。每个小时4个承载架通过齿轮驱动几乎垂直地在系统内运输。

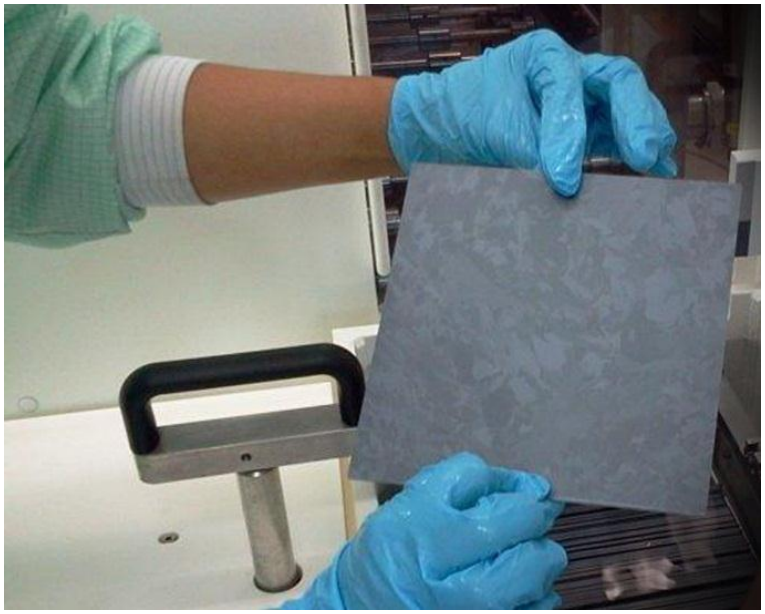
图二：喷头系统

革命性的喷头系统通过冲洗每个晶片切割表面的全部区域保证取得良好的清洗效果。精确的水流控制考虑到了最低用水量，较低的水压则不会损坏易损元件表面。以上的这些使得损耗率十分的低，这正是施密德集团向顾客保证的。

经过该系统的晶片不会有金属离子污染物残留，这是因为所有接触晶片的部分，包括所有加工区、管道、槽箱等都是塑料制造的。

脱胶工序在浸泡槽中进行，该浸泡槽预先低压注入含水酸。 在这部分化学溶剂的循环利用保证了其低消耗率。接下来的冲洗程序将晶片上的除胶溶剂移除。

“清洁晶片的好处仍然被人们低估。”产品经理Cristoph Jansen如是说。经过预清洁的晶片有助于减少除胶工序中化学物品的使用。越来越多顾客需求的全自动分离系统使晶片变得干净，降低损耗率。最棒的是：采用我们高效能的预清洁系统，可以缩短将近一半的晶片最后清洁程序。



图二：全面清洗前和清洗后的晶片

因此，采用预清洁及脱胶系统的功能导向型设计，施密德集团坚信该创新性系统未来在市场上会继续取得成功。产能为600MWp的前期型号的设备已经安装在亚洲部，应用于经金刚丝切割的晶片的预清洁。

关于SCHMID集团

SCHMID集团为整条太阳能硅片、单元和模块供应链提供高效的系统及优质的程序解决方案。涵盖了从单体设备到整厂安装，包括提供性能参数，如生产能力和效率度。有自己的技术中心，并与高校和研究机构合作，研发创新性程序技术，为打开市场做好准备。

SCHMID欢迎您前往SNEC：2012年5月16-18日，E5展厅，560号展位。届时将展出SCHMID计量分类器、SCHMID晶片后台的预清洁系统。

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