

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

Ex parte RODNEY L. HILL

---

Appeal No. 1998-2582  
Application No. 08/669,794

---

ON BRIEF

---

Before CAROFF, KRATZ and DELMENDO, Administrative Patent Judges.

CAROFF, Administrative Patent Judge.

DECISION ON APPEAL

This decision on appeal relates to the examiner's final rejection of claims 12-17, all the claims now pending in appellant's application.

The claims are directed to a method of processing semiconductor wafers having an exposed aluminum-containing layer. The method includes the step of rinsing the wafers

Appeal No. 1998-2582  
Application No. 08/669,794

with deionized (DI) water which has been purified by being  
subjected to air



Appeal No. 1998-2582  
Application No. 08/669,794

that the examiner has failed to establish a prima facie case of obviousness. Accordingly, we shall reverse the sole rejection at issue essentially for the reasons discussed in appellant's brief.

Hirofuji relates to a method for purifying water to be used in a process for manufacturing semiconductor devices. In Hirofuji, water is passed in sequence through a deaerator, an oxidation device, an ion eliminating device and a particle eliminating device.

Appellant acknowledges that it was a well known problem in the semiconductor field that DI water undesirably etches aluminum and aluminum alloys. Appellant also acknowledges that it was common practice to subject DI water to injection of air to remove dissolved carbon dioxide. Apparently, appellant was the first to recognize that the problematic etching of aluminum caused by DI water was not due to the DI water itself but rather to the DO content of the DI water.

While Hirofuji (col. 1, ll. 25-29) suggests that reduction of DO content may be desirable, this suggestion does not arise in the particular context of a purification process which involves an air injection step, as recited in the

Appeal No. 1998-2582  
Application No. 08/669,794

instant claims, where DO is necessarily present at relatively high levels. Neither does Hirofuji particularly relate to the rinsing of semiconductor wafers which have an exposed metal layer including aluminum, the operational area where the problem addressed by appellant arises.

Thus, we find there would be no motivation to combine the teachings of Hirofuji with the admitted prior art in a way which would render the claimed process obvious within the purview of 35 U.S.C. § 103.

In a nutshell, the examiner has not given due regard to the principle that patentability may reside in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. See In re Sponnoble, 405 F.2d 578, 585, 160 USPQ 237, 243 (CCPA 1969); and Eibel Process Co. v. Minnesota & Ontario Paper Co., 261 U.S. 45, 67-68, 1923 CD 623, 639-40 (1923).

Appeal No. 1998-2582  
Application No. 08/669,794

For the foregoing reasons, the decision of the examiner  
is reversed.

REVERSED

MARC L. CAROFF	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
PETER F. KRATZ	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
	)	
	)	
	)	
ROMULO H. DELMENDO	)	
Administrative Patent Judge	)	

MLC:hh

Appeal No. 1998-2582  
Application No. 08/669,794

SKJERVEN MORRILL MACPHERSON, LLP  
25 Metro Drive  
Suite 700  
San Jose, CA 95110