

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte OTTO IMMEL,
HARALD MULLER

Appeal No. 94-1863
Application 07/832,154¹

ON BRIEF

Before SOFOCLEOUS, JOHN D. SMITH and WARREN, Administrative Patent Judges.

SOFOCLEOUS, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 to 8 and 10 to 16. Claim 9 stands allowed.

¹ Application for patent filed February 6, 1992.

Appeal No. 94-1863
Application 07/832,154

The subject matter on appeal is directed to a catalyst for removing sulfur compounds from industrial gases and to a process for the production of the catalyst. The catalyst consists essentially of an inorganic, abrasion-resistant and non-combustible support which is uniformly impregnated with a mixture of (1) at least one oxide of an element selected from the sixth secondary group of the Periodic System of Elements and (2) at least three other oxides of elements selected from the first, second, sixth, and eighth secondary group of the Periodic System of Elements.

In their brief, appellants state that none of the claims will be argued separately. Accordingly, all the claims are considered to stand or fall with claim 1, the only independent claim, which reads as follows:

1. A catalyst for removing sulfur compounds from industrial gases consisting essentially of an inorganic, abrasion resistant and non-combustible support uniformly impregnated with a mixture of at least one oxide of an element selected from the sixth secondary group of metals of the Periodic System of Elements and at least three other oxides of elements selected from the first, second, sixth and eighth secondary groups of metals of the Periodic System of Elements.

The reference relied upon by the Examiner is:

van der Wal et al. (van der Wal) 4,629,612 Dec. 16, 1986

Claims 1 to 8 and 10 to 16 stand rejected under 35 U.S.C.

Appeal No. 94-1863
Application 07/832,154

§ 112, first paragraph, based on a lack of written description for the limitation "at least three other oxides."

Claims 1 to 8 and 10 to 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over van der Wal.

After having carefully considered the positions and arguments presented by both the examiner and appellants, we conclude that the rejection under 35 U.S.C. § 112, first paragraph, should not be sustained, while the rejection under 35 U.S.C. § 103 over van der Wal should be sustained. We add the following comments for emphasis.

An application disclosure is directed to one skilled in the art. Chemcast Corp. v. Arco Indus. Corp., 913 F.2d 923, 926, 16 USPQ2d 1033, 1036 (Fed. Cir. 1990). In order to satisfy the written description requirement of 35 U.S.C. § 112, an application must reasonably convey to the artisan that the applicant had possession of the claimed subject matter at the time the application was filed. Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991).

It is the examiner's position that appellants' disclosure does not contain a written description for the limitation, "at least three other oxides of elements selected from the first,

Appeal No. 94-1863
Application 07/832,154

second, sixth, and eighth secondary group of the Periodic System of Elements," because the disclosure at page 2, lines 32 to 35, reads at least two other oxides. In our view, appellants'

disclosure would reasonably convey to those skilled in the art that the language at least two other oxides would include at least three oxides as now recited in claim 1, notwithstanding the fact that the examples only show catalysts containing three metal oxides. In this regard, we note the disclosure at page 3, lines 17 to 27, which reads as follows:

Preferred metal oxides are the oxides of Cu, Zn, Cr, Mo, W, Fe, Co and Ni.

In one preferred embodiment of the invention, the inorganic support is impregnated with each of the metal oxides in a quantity of from about 0.05 to about 4% by weight and more preferably from about 0.1 to about 2% by weight, based on the quantity of support material.

A particularly preferred catalyst is made up of an aluminum oxide support impregnated with at least three of the following oxides: copper oxide, iron oxide, molybdenum oxide, chromium oxide and zinc oxide.

Certainly, this portion of the disclosure would clearly convey to those skilled in the art that all eight, or preferably at least three, metal oxides without any restrictions as to their combination can be impregnated in the inorganic support. Thus, appellants'

Appeal No. 94-1863
Application 07/832,154

disclosure is considered in compliance with 35 U.S.C. § 112, first paragraph.

Adverting to the rejection over van der Wal, we agree with the examiner for the reasons stated by him that van der Wal renders obvious the claimed invention. Van der Wal, column 1, lines 7 to 26, and column 4, lines 31 to 38, and column 8, lines 4 to 15, teaches a catalyst for removing sulfur compounds from industrial gases consisting essentially of an inorganic support impregnated with "mixed oxides of iron with one or more metals of the group consisting of zinc, copper, cobalt, and of the metals of groups IV to VII of the periodic table of the elements" (see column 4, lines 36 to 39). Van der Wal, column 5, lines 1 to 7, exemplifies the use of eight metal oxides from groups IV to VII, four of which include the metal oxides exemplified by appellants, i.e., chromium oxide (Cr_2O_3), tungsten oxide (WO_3), molybdenum oxide (Mo_2O_3), and zinc oxide (ZnO). Clearly, van der Wal's generic disclosure includes many of the catalysts embraced by appellants' genus. Appellants do not argue otherwise, but rather contend that one of ordinary skill in this art would have to pick and choose from the teachings of van der Wal in order to arrive at appellants' claimed invention. However, there is nothing unobvious in choosing some catalysts from among the many

Appeal No. 94-1863
Application 07/832,154

disclosed in van der Wal. Cf. In re Lemin, 332 F.2d 839, 841, 141 USPQ 814, 815 (CCPA 1964). Consequently, we agree with the examiner that appellants' claimed catalyst is prima facie obvious over van der Wal.

Appellants urge that their claimed invention is distinguishable from van der Wal in five respects which we will address seriatim.

Appellants urge that van der Wal does not disclose a single catalyst in which four or more metal oxides are present whereas at least four different metal oxides must be present in the claimed catalyst. This argument is not considered well taken. A reference must be considered not only for what it expressly teaches, but also for what it fairly suggests. In re Burckel, 592 F.2d 1175, 1179, 201 USPQ 67, 70 (CCPA 1979). Van der Wal, column 5, lines 1 to 7, teaches a catalyst containing mixtures of iron oxide with any of eight metal oxides selected from chromium oxide (Cr_2O_3), manganese oxide (MnO_2), vanadium oxide (V_2O_3), tungsten oxide (WO_3), molybdenum oxide (Mo_2O_3), titanium oxide (TiO_2), zinc oxide (ZnO), and zirconium oxide (ZrO_2). In making the selections, van der Wal, column 5, lines 8 to 17, gives the caveat that Cr, Ti and Zr should not be combined together because they form a stable non-reactive oxide not suitable

Appeal No. 94-1863
Application 07/832,154

for the removal of sulfur. In our view, this disclosure clearly conveys to those skilled in the art that van der Wal contemplates catalysts containing three, four or more metal oxides.

Appellants urge that van der Wal teaches that iron oxide is a critical component of his catalyst whereas it need not be present in the claimed catalyst. This argument is not considered well taken. The fact that iron oxide is a critical component of van der Wal's catalyst, but not of appellants', does not show that van der Wal does not render obvious the claimed subject matter. Appellants' catalyst may include iron oxide. As we noted above, van der Wal's generic disclosure includes many of the catalysts embraced by appellants' genus and there is nothing unobvious in choosing some catalysts from among the many disclosed in a reference.

Appellants urge that van der Wal teaches that the critical oxide of appellants' invention (an oxide of an element of the sixth secondary group, i.e., Cr, Mo and W) is optional in van der Wal's catalysts. This argument is not considered well taken. This does not diminish in any way van der Wal's teachings since, as we noted above, van der Wal's generic disclosure includes many of the catalysts embraced by appellants' genus and there is nothing

Appeal No. 94-1863
Application 07/832,154

unobvious in choosing some catalysts from among the many disclosed in a reference.

Appellants urge that the amount of oxide present in van der Wal is higher than the amount present in their claimed catalyst and that their claimed catalysts are effective at lower temperatures than the van der Wal catalysts. These arguments are not considered well taken. These differences, the amount of oxide present and the usefulness of appellants' catalyst at low temperatures, are not recited in appellants' claim 1, upon which dependent claims 2 to 8 and 10 to 16 stand or fall. Since we do not read unrecited limitations into a claim, such unrecited limitations may not be relied to

distinguish the claim over a reference. Constant v. Advanced Micro-Devices, Inc., 848 F.2d 1560, 1571, 7 USPQ2d 1057, 1064 (Fed. Cir. 1988); In re Prater, 415 F.2d 1393, 1404, 162 USPQ 541, 550 (CCPA 1969). Even if these limitations were recited in claim 1, which they are not, appellants have not shown that their claimed catalysts rendered unexpected results over the catalysts disclosed in van der Wal.

Appeal No. 94-1863
Application 07/832,154

For the foregoing reasons, the rejection of claims 1 to 8 and 10 to 16 under 35 U.S.C. § 112, first paragraph, is reversed and the rejection of claims 1 to 8 and 10 to 16 over prior art is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

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MICHAEL SOFOCLEOUS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOHN D. SMITH)	
Administrative Patent Judge)	APPEALS AND
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Appeal No. 94-1863
Application 07/832,154