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Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WILHELM KARNER

Appeal No. 2004-0759
Application No. 09/363,038

HEARD: May 20, 2004

Before GARRIS, WALTZ, and KRATZ, Administrative Patent Judges.
KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's refusal to allow claims 14-18 and 22-27, which are all of the claims pending in this application.

BACKGROUND

Appellant's invention relates to an apparatus for producing electrolytically coated steel and includes a pickling tank and an electro-coating tank positioned downstream therefrom. A further understanding of the invention can be derived from a reading of exemplary claims 14 and 18, which are reproduced below.

14. An apparatus for producing an electrolytically coated hot-rolled steel substrate, said apparatus comprising:

a pickling tank having a feed device for feeding a hot-rolled steel substrate into said pickling tank for pickling said steel substrate, and a discharge for discharging a pickling steel substrate; and

an electro-coating tank positioned immediately downstream of said pickling tank to receive said pickled steel substrate directly from said pickling tank substantially without any intermediate processing stages between said pickling tank and said electro-coating tank, said electro-coating tank containing an electrolyte solution and electrodes for producing an electric current in the solution to electro-coat said pickled steel substrate.

18. The apparatus according to claim 14, further comprising a conduit from said electro-coating tank to said pickling tank for directing spent electrolyte solution to said pickling tank.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Oshima et al. (Oshima)	5,236,574	Aug. 17, 1993
Ishibashi et al. (Ishibashi)	5,766,438	Jun. 16, 1998

Claims 14-16, 22 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Oshima. Claims 17, 18 and 24-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Oshima in view of Ishibashi.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant in the briefs and the examiner in the answer, including the rejection incorporated therein. In so doing, we find ourselves in agreement with the examiner with respect to the first stated rejection. Thus, we affirm the § 103(a) rejection of claims 14-16, 22 and 23 as being obvious over Oshima for reasons as set forth in the answer and further discussed below. However, we reverse the examiner's § 103(a) rejection of claims 17, 18 and 24-27. Our reasoning follows.

Rejection of claims 14-16, 22 and 23

Appellant maintains that each of the claims are separately patentable. Accordingly, to the extent that separate arguments have been presented and maintained for each of the rejected claims consistent with 37 CFR § 1.192(c)(7 and 8)(2001), we shall treat the claims separately.

Independent claim 14 is drawn to an apparatus that includes at least a pickling tank and an electro-coating tank located

downstream from the pickling tank. As reasonably determined by the examiner, Oshima, like appellant, discloses steel treating apparatus including: (1) a tank (9, fig. 1) that is useful for treating steel with acid to remove a surface oxide therefrom and corresponds to appellant's pickling tank; and (2) a downstream electroplating tank (14, fig. 1) that corresponds with the claimed electro-coating tank.

Appellant maintains that Claim 14 provides for a hot rolled steel treating apparatus and is constructed without any intermediate processing stages between the pickling and electro-coating tanks and such an equipment arrangement is not suggested by Oshima. We disagree.

At the outset, we note that whether the claimed apparatus is used for treating cold or hot rolled steel is immaterial since the appealed claims are drawn to an apparatus, not a method. Thus, the material that may be acted upon by the structure does not serve to distinguish the claimed apparatus from the applied prior art. Moreover, the tank (9, fig. 1) of Oshima is taught as being useful for treating steel with an acid as disclosed at column 5, lines 58-60 and column 6, lines 17-21 of the patent.

We are not persuaded by appellant's argument that the language of claim 14 concerning the positioning of an electro-

coating tank immediately downstream of the pickling tank excludes any intermediate processing stages as appellant alleges to be required by Oshima. This is so because that tank positioning limitation is qualified by the language "substantially without any intermediate processing stages" and claim 14 employs the open "comprising" term.

During patent prosecution, claims are to be given their broadest reasonable interpretation consistent with the specification, as the claim language would have been read by one of ordinary skill in the art in view of the specification and prior art. See In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). It is proper to use the specification to assist in interpreting the claims. See In re Morris, 127 F.3d 1048, 1053-56, 44 USPQ2d 1023, 1027-30 (Fed. Cir. 1997). As illustrated in appellant's drawing figure 1 and as described in the specification in the paragraph bridging pages 6 and 7 thereof, another optional stage (tank 34) and associated equipment can be inserted between a second pickling tank (18) and an electro-coating station (18) which stage may be used for rinsing the steel. Also, see appealed claim 16, which depends from claim 14. Given that disclosure in the specification and giving the claim term "substantially" the broadest reasonable

construction consistent therewith, it is clear that appealed claim 14 is not so narrow in scope as to preclude the presence of other treating equipment between the pickling tank and the electro-coating tank as argued.

Furthermore, as pointed out by the examiner in the answer in considerable detail, Oshima teaches that the location of the post-galvanizing treating (pickling) tank (9, fig. 1) is not critical and the location of a skin pass rolling mill (11) and leveller (12) between the tank (9) and electroplating tank (14) is disclosed as optional in the patent. See, e.g., column 5, lines 1-18 and column 6, lines 43 and 44 of Oshima.

Furthermore, the pretreatment tank (13) and tank (10) are washing facilities which are not precluded by the appealed claim 14 language for reasons discussed above. Alternatively, it would have been prima facie obvious to one of ordinary skill in the art to eliminate those washing facilities together with the optional rolling mill (11), leveller (12) and associated bridle rolls (19) of Oshima, as desired, to avoid the additional expense associated with such processing because Oshima makes manifest that the only essential equipment that is required downstream of the galvanizing apparatus is the surface treatment apparatus (tank 9, fig. 1) and the electroplating apparatus (tank 14, fig. 1). See,

e.g., column 3, lines 47-58 of Oshima. One of ordinary skill in the art would have desired to omit the optional equipment because doing so would reduce the cost of the apparatus. See In re Thompson, 545 F.2d 1290, 1294, 192 USPQ 275, 277 (CCPA 1976); In re Clinton, 527 F.2d 1226, 1229, 188 USPQ 365, 367 (CCPA 1976).

Concerning dependent claim 15, appellant maintains that Oshima does not teach the use of a continuous feed device as required. We disagree because Oshima (column 2, lines 60-68 and column 3, lines 47-58) expressly states that providing a continuous plating line operation is an object of their disclosed apparatus and consequently the illustrated feed rollers depicted in figure 1 of Oshima would have been understood by one of ordinary skill in the art as being constructed for continuous operation. Concerning claim 16, the recited rinse tank reads on the tank (10, fig. 1) and/or pretreatment tank (13, fig. 1) of Oshima. Appellant's argument concerning the immediateness of the downstream location of the equipment is not found persuasive for reasons discussed above and in the answer. With regard to dependent claim 17 and the recited pickling acid limitation, we note that appellant's counsel withdrew that argument at the oral hearing when questioned as to why some of the tank acids

disclosed by Oshima would not meet that limitation.¹ With respect to claim 22, Oshima describes an electroplating tank, which would have fairly suggested the use of an anode as part of such a structure to one of ordinary skill in the art.² Consequently, appellant's arguments are not persuasive. It follows that we will sustain the examiner's rejection of claims 14-16, 22 and 23.

Rejection of claims 17, 18 and 24-27

Each of claims 17, 18 and 24-27 require conduits connecting the electro-coating tank and the pickling tank directly or via a metal dissolving tank. The examiner has not fairly explained how the teachings of Ishibashi with respect to an electrolyzer that is disclosed as being useful for treating spent pickling liquor would have suggested conduit connection(s) between the electroplating tank (14) and surface treatment (pickling) tank (9) of Oshima. In this regard, the electrolyzer of Ishibashi as used in treating spent pickling liquor for recirculation to the

¹ See column 6, lines 17-21 of Oshima. We further observe that Ishibashi discloses hydrofluoric acid, one of Oshima's described acids, as a pickling liquor component.

² See, e.g., Kirk-Othmer, Encyclopedia of Chemical Technology, 3rd Ed., Vol. 8, p. 833 (copy attached).

pickling tank has not been established as an electroplating device or equivalent. It follows that we will not sustain the examiner's second rejection on this record.

CONCLUSION

The decision of the examiner to reject claims 14-16, 22 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Oshima is affirmed. The decision of the examiner to reject claims 17, 18 and 24-27 under 35 U.S.C. § 103(a) as being unpatentable over Oshima in view of Ishibashi is reversed.

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

AFFIRMED-IN-PART

Bradley R. Garris)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
Thomas A. Waltz)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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