

United States District Court,
N.D. California.

KLA INSTRUMENTS CORPORATION,
Plaintiff.

v.

ORBOT INC., and Orbot Systems,
Defendants.

No. C 93-20886 JW

June 13, 1996.

William L. Bretschneider, Hoge, Fenton, Jones & Appel, San Jose, CA.

Neil F. Greenblum, Greenblum & Bernstein, Reston, VA.

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ORDER RE: CONSTRUCTION OF PATENT CLAIM

WARE, District Judge.

KLA owns U.S. Patent No. 4,926,489, ("the '489 Patent") entitled "Reticle Inspection System." KLA filed this lawsuit against Orbot alleging, among other things, that Orbot's reticle inspection systems infringe claim 1 of the '489 patent. Orbot denies infringement and alleges in a counterclaim that the patent is invalid or unenforceable. On February 1 and 8, 1996, the Court conducted a hearing pursuant to *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed.Cir.1995) in order to determine the meaning of language used in claim 1 of the '489 Patent. This Order sets forth the Court's findings.

"To ascertain the meaning of claims, we consider three sources: The claims, the specification, and the prosecution history." *Id.* (quoting *Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1561 (Fed.Cir.1991)). "Expert testimony, including evidence of how those skilled in the art would interpret the claims, may also be used." *Id.* (quoting *Fonar Corp. v. Johnson & Johnson*, 821 F.2d 627, 631 (Fed.Cir.1987)).

A reticle is a device used in the manufacture of integrated circuits. The specifications for the circuit are fed into a computer in a digital format. The specifications are stored in a computer data base and later transformed into a circuit pattern, which should match the digital parameters exactly. The pattern is transferred to the surface of the reticle. The reticle is used to make photo masks, which are used to produce the circuit on silicon wafers or "chips." Precision and accuracy between the digital specifications and the reticle are extremely important because errors on the reticle will result in errors in the mass-produced chips.

The invention is an automatic high-speed inspection system which facilitates comparison of the circuit design on the reticle with the original design information stored in the computer data base.

Claim 1 states, in pertinent part:

"Optical inspection apparatus for scanning a patterned object and comparing it to information contained in

an electronic data base, comprising:

optical scanning means ...
data base means ...
data alignment means ...
timing control means ...
defect detector means ..."

Thus, rather than describe a structure for the reticle inspection system, the '489 patent describes the components of the inspection device as a "means for" performing a specified "function", i.e., it is a "means-plus-function" patent. Title 35 U.S.C. Section 112, paragraph 6 permits a patent claim to use "means-plus-function" without recitation of a structure. However, Section 112 provides that "such claims shall be construed to cover the corresponding structure, material or acts described in the specification and equivalents thereof." Thus, Section 112, para. 6 limits the scope of a "means-plus-function" patent to the structure described in the specification and equivalent structures. *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931 (Fed.Cir.1987). Therefore, in construing the meaning of a "means-plus-function" claim under *Markman*, this Court must use the corresponding structure, if any, described in the specifications.

The specification consists of 18 drawings followed by 20 columns of text describing a preferred embodiment of the invention. Each component is numbered and labeled. For example:

Referring now to FIG. 1 of the drawing, the preferred embodiment of a reticle inspection system according to the present invention is schematically illustrated at 20. The reticle inspection system 20 includes an inspection station 22 for inspecting a reticle or photomask 24 for defects, and a reticle inspection adapter 26 for generating a digital representation of the reticle from a stored database which is in a high-level description. The inspection station 22 includes an air-bearing stage 28 mounted on a granite table 30 for transporting and positioning the reticle or photomask 24 to be inspected. The stage 28 is movable in the X and Y direction by stepper motors and lead screws that are schematically illustrated as 32 and 34, respectively. A reticle holder 36 is rotatable in the 0 direction to align features of the reticle with the X and Y directions.

The parties do not dispute that the structure set forth in the specification should be used to interpret the meaning of the claim; they disagree, however, over how much of the detail contained in the specification should be used in defining the meaning of the patent.

KLA contends that the definition should incorporate only the structure without reference to the particular numbered component described in the preferred embodiment. Orbot contends that the definition should include the numbered components. The following is an example of how the two definitions compare with one another:

KLA Proposed Instruction

A. The functions performed by the "optical scanning means" are:

1. To be responsive to the first timing control signal generated by the timing control means;
2. To scan the patterned object; and

Orbot Proposed Instruction

A. The functions performed by the "optical scanning means" are:

1. To be responsive to the first timing control signal generated by the timing control means;
2. To scan the patterned object; and,

3. To develop the first data signal which includes a sampled and quantized electronic representation of the patterned object.

The patent discloses the following structures as the "optical scanning means":

1. A microprocessor used by the system's inspection station
2. A table
3. An illuminator
4. A stage
5. A stage position sensor
6. Motors that move or "drive" the stage left and right, up and down, or at some angle in between.
7. An automatic focus circuit
8. A microscope
9. A light detector

3. To develop the first data signal which includes a sampled and quantized electronic representation of the patterned object.

The patent discloses the following structures as the "optical scanning means":

1. Inspection station microprocessor 70
2. Granite table 30
3. Illuminator 40
4. Air-bearing stage 28
5. Optical encoder 78 (stage position sensor)
6. X-Axis encoder 28
7. Stepper motor controllers 72, 74, and 76
8. Automatic focus circuit 52
9. Inspection optics 42 and 44
10. Left detector 48 and right detector 50 which include:
 - a. Sensors 114 and 116
 - b. Analog to digital converters 118 and 120
 - c. Level converters 122 and 124
11. Stepper motors and lead screws 32 and 34
12. Reticle holder 36
13. Motor 38

Accordingly, the question which faces this Court is how much specificity with respect to the structure contained in the specifications should be used in stating the meaning of a means-plus-function patent.

There is no case which articulates a precise rule for determining the amount of specificity. However, *In re Donaldson Co., Inc.*, 16 F.3d 1189 (Fed.Cir.1994) is instructive in this regard. In *Donaldson*, the court was required to interpret the patentee's "means, responsive to pressure increases in said chamber ...". In arriving at the definition of the scope of such language, the court states:

The plain and unambiguous meaning of paragraph six is that one construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure." 16 F.3d at 1193 (emphasis added).

A proper construction of the '489 patent must include reference to any "corresponding" component identified in the specification, including its material of construction and method of operation. The Court finds that the claim construction contained in the proposed jury instruction submitted by Orbot, with its reference to the specific structure identified in the specifications, is the appropriate specificity which must be used to define the claim in the '489 patent. The Court orders the parties to meet and confer and to submit a proposed joint instruction which identifies the corresponding structure for each function which is at issue in this case.

In addition the parties are order to file a joint status report indicating the parties' proposed litigation plan for the remainder of this action. Such report shall include a proposed trial date and must be submitted to the Court by August 1, 1996. The report shall also include any motions which the parties contend are under submission with the Court and the effect that the findings contained herein have, if any, on such pending motions. The report shall also include any and all anticipated motions.

IT IS SO ORDERED.

N.D.Cal.,1996.

KLA Instruments Corp. v. Orbot Inc.

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