

A NEW
SHOP MICROSCOPE
FOR SURFACE INSPECTIONS

•••
William A. Sobel

B A U S C H & L O M B

THE SHOP MICROSCOPE

SMALL, PORTABLE, BATTERY
ILLUMINATED—HANDY IN DARK
INACCESSIBLE PLACES

Routine inspection of product and process equipment is a universal practice in most industries today. By far the greater majority of inspection operations are concerned with the nature of surfaces and of finished parts. Present day demands for standards of high quality and uniform product are resulting in an increasing use of optical instruments to magnify flaws and defects, and thus control quality within specified limits.

To meet this need, Bausch & Lomb presents a newly designed, portable Shop Microscope with a self-contained illuminator and an engraved scale mounted in the body tube which reads direct to thousandths of an inch. Estimations can easily be made to .00025". Several refinements over earlier models have been made, while at the same time, manufacturing im-

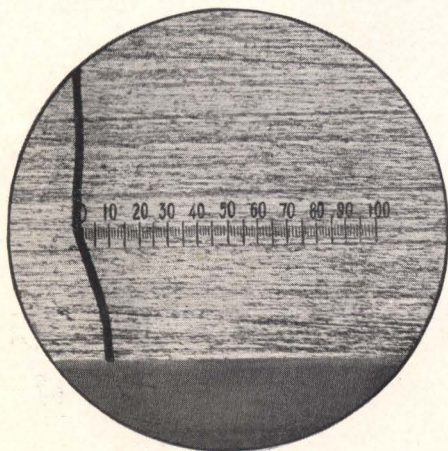
provements have made it possible to reduce the cost substantially. The magnifying power of the instrument is $40\times$. This provides, at a new low price, a small handy shop tool which can be carried around in the pocket, and will quickly reveal finish, smoothness, and all manner of surface conditions. The battery illuminator makes it possible to take the instrument into the darkest corners of the shop where oftentimes production-line inspections are highly valuable.

IN MECHANICAL INDUSTRIES

In the mechanical industries, the Shop Microscope is valuable in examining cracks, flaws, and blowholes. It is ideal for measuring the diameters of small holes, as in heading dies, gauges, diameters of impressions in Brinell tests, and for other surface measurements. Precise mechanical parts may be inspected for wear. The rapid rise of arc and oxy-acetylene welding of machine tool frames, piping, structural members, pressure vessels and even jigs and fixtures, has led to the need of an inexpensive device for quickly examining welds without always taking recourse to analysis of samples.

FINISHING AND ELECTRO-PLATING

In finishing, and electro-plating, this microscope aids in the examination of finished surfaces for cracks,



*Portion of a cracked forging as seen through
the Shop Microscope*

blisters, irregular deposits and pitting as well as buffing quality. It can be used in the search for slag inclusions and poor surface conditions of the base metal before plating. On painted surfaces it will reveal quality, uniformity and distribution of pigment. Half-tones and color-process plates, as well as prints, can be studied for the size, shape and distribution of "points."

TEXTILES AND PAPER

The instrument is also adapted for the examination and identification of fibre textures, distribution of coloring matter, and sizing in the paper industries. It is also valuable for the inspection of Foundrinier wires for wear. In textile factories, the weave, twist, and general nature of the fibres can be examined and comparisons made. Fabric finishes, markings, lusters, and dry transfers can be inspected for penetration and quality.

LEATHER, ETC.

In the leather industry, the causes of a large number of common defects which influence quality, and hence selling price, can be quickly determined with the Shop Microscope. It can be used in practically all phases of the tanning process, from whole hide inspection, to splitting, dyeing, finishing, and final assorting. In making patent leather, it affords a ready method of examining for cracks, blisters, thickness of coating, and faulty dope.

Many more practical uses for this microscope exist throughout all industry, entirely too numerous to review here. Wherever surface protection represents value, or quality



THE NEW SHOP MICROSCOPE

specifications must be met, this microscope will fill a definite need.

In use the shop microscope is placed on the surface or against the part to be inspected, and the illuminator button pressed. This illuminates the specimen with a grazing light which, because of the deep shadows cast, is the most effective means known for the detection of surface characteristics.

Fine scratches or flaws can be more easily discerned when examining a specimen if the instrument is rotated somewhat about the vertical axis, so that varying shadows will be cast by the illuminator.

TO FOCUS

The instrument must first be focused for use. To accomplish this the eyepiece cap is rotated slowly to the right or left until the scale appears sharp and distinct. Next, the knurled button on the side of the body tube is loosened and the draw

tube is moved up or down until the object (as a printed page) comes into clear focus. The clamping button is then tightened. The bulb should be lighted to facilitate accurate focusing. The microscope is now in adjustment and ready for use.

The field of view measures $7\frac{3}{32}$ " across. The scale is $1/10$ " long and is graduated in $1/1000$ ".

Height of Microscope. $7\frac{3}{4}$ "

Weight. $1\frac{1}{2}$ lbs.

Finish. . . Black enamel and chromium

THE PRICE

Description	Catalog No.	Code Word	Price
Shop Microscope, $40\times$ as described.	31-29-33-34	Ahupv	\$30.00
Battery Cell (two required)	71-72-83	Hyesg	.05
Bulb, 2.5 Volt.	71-71-25	Hoamk	.09 net

The prices herein are subject to change without notice and to increase for taxes, excises or other charges imposed by governmental authorities with respect to articles listed herein or to the sale thereof.

BAUSCH & LOMB OPTICAL CO.

Rochester, N. Y., U. S. A.

New York

Chicago

San Francisco

London, Eng.

Frankfurt a/M

District Offices or Representatives in

Boston, Philadelphia, Washington, Detroit and Los Angeles

Agents in all Principal Foreign Countries.

William A. Sokol