

# The (VP) Exakta, its History and Advantages Instalment 1.

## Introduction

In the Leiden and/or in the Oxford International Ihagee/Exakta Conventions I have displayed a number of (scanned) transparencies, showing the production process of the VP Exakta. Of some images it was clear what they were showing, others kept us wondering. These transparencies belonged to a lecture that Mr. Heynderickx, Dutch importer for Ihagee, used to give in 1935 for photo clubs and customers of photo shops.

Only recently I found the original text of this lecture. I intend to reproduce (a translation of) this lecture on my site, together with the images, but in instalments, because all in all there are 40 images and many pages of text. This is the start. *HR*

## Figure 1: City View Dresden.

Dresden on the Elbe, which is the capital of Saxony, not only has a special meaning as an art centre, but also stores within its walls various developed industry sectors. Dresden has always



been regarded as home of some companies that have already been active for decades in the construction of photographic equipment and for the propagation of amateur photography.

And even today we find in this city a number of important factories of photographic cameras, so Dresden can really be seen as the metropolis of the German photo industry. If the visitor guides his steps to the east of this city, at the

gate of the Dresden Photo-quarter the massive building of Ihagee camera work, Steenbergen & Co will greet him. This company has occupied itself since its foundation with the manufacture of high-quality cameras, and has in recent years, as a top performance of manufacturing, put a number of world-famous plane shutter and reflex cameras on the market.

## Figure 2: View on the Ihagee Factory.



Due to the quality of its products Ihagee Kamerawerk was classified soon in the ranks of leading factories. The successful development of this company is reflected purely externally in the large, architecturally well built factory building. As specialty Ihagee currently runs the production of the Exakta SLR camera, and to this model as well as its production process, the following words and pictures will be dedicated. They will hopefully give the viewer and listener a glimpse of the carefulness and precision with which these cameras are built. In the bright manufacturing halls of the works, one Exakta-part after the other is made, and we must limit ourselves in our spiritual walk through the factory by selecting the main aspects of Exakta production, because obviously Ihagee Kamerawerk produces other high-quality cameras and enlarger devices.

**Figure 3: Large Image of the Exakta.**

Before the tour around the work begins, this picture will first make you familiar with the Exakta camera. The special advantages of this model will get detailed assessment at the end. Now, let us be content with establishing that the Exakta purely externally has a really pleasing appearance, and this sympathetic feeling will deepen when you see and hear how carefully every single department works on this high-quality camera. May the promising exterior of the Exakta help you to follow this lecture with interest.



**Figure 4: Ihagee front garden.**

We enter the factory building from the garden and over the entrance greets us a symbol from the rear. The massive flue is designed to suck the sawdust from the machines in the woodworking departments.



### Figure 5: Tools construction

What the designer devised on the drawing board gets in this department "Tools construction" its first rough form. For all fittings, camera and accessory parts the necessary manufacturing



punching and drawing tools are constructed here. Each tool consists of two parts: a die and a punch. The die is fixed in the machine during punching or pressing, while the plunger is moved in a vertical direction up and down. On such a complete tool pair a locksmith works for one to three weeks.

The tool steel gets the required form for its task, according to the design drawing, by planing, milling and filing; individual sections of the tool are fitted

together. As long as the steel is worked not hardened, it isn't useful for its subsequent use as a print or drawing tool. Therefore, the completely finished tool is then hardened by heating it up to about 800 degrees Celsius. The red-hot steel shows the state of heating by discoloration, and at the right moment it is quenched by immersion in oil or cooled in air. This process reduces the carbon content of the steel and brings special hardening with it.

### Figure 6: Tool storage.

For each camera part a special tool must be made, which is kept in the "tool storage" on large shelves ready to hand, so with each new camera series the tools are now available for punching and pressing machines.

Before the raw material used for the Exakta is supplied to the factory, it undergoes a thorough examination. Part of the metal (mostly brass, aluminium and stainless steel are used in the Exakta) are examined microscopically and also tested for hardness, tensile strength and other such



properties. On large automatic shears the metals are cut into strips suitable for the production widths that correspond exactly to the width of the punching, stamping or pressing tool. This tailored material is transported to the punching department. The metal parts for the round parts comes in tubes and rods, and - sometimes also divided into smaller quantum - over to the lathe shop.

### Figure 7: Punching.

In "Punching" we find the biggest punching and pressing machines. Classified according to the type we find eccentric and crank presses, manual presses as well as modern spindle and



friction presses with a pressure load up to 80,000 kg. The raw metal strip runs through the machine, and by pressure on a foot lever the lowering punch punches part for part. This department already reflects the special characteristic of the camera manufacturing: immense number of small parts, of which the processing time is extremely short. In contrast, the machinery industry should perhaps be mentioned that produces relatively fewer parts with long processing times. The helical

screw mount of the Exakta is pressed in Punching, to be passed on to the "Lathe shop" for further processing. Easier stamping parts are produced by a rough-processing subdivision of the work room "Mechanics". Because incorrectly stamped parts are excluded from the outset of the further processing, all pieces are checked before transfer to another department.

### Figure 8: Lath Shop.

The Lath Shop, equipped with modern machinery, is now up to the task of bringing the raw round parts in the accurate determined form.

In a lathe the part in question is put into rotating movement, and turned off in the exact profile shape. For small screws and round parts fully automatic lathes (screw robots) are available to perform all operations without human help. Modern turret lathes facilitate the efficient fabricating extremely: the relevant Exakta part can be simultaneously processed, fixed in the lathe, with different tools at once. A special performance of this department is mainly the production of the patented Exakta helical screw mount, whose advantage is the fact



that at relatively limited rotation already produces a strong movement .i.e. a significant extension of the camera is reached. The turns of the screw mount are "sharpened". The tube is mounted on a slowly rotating cartridge and the tip of a cutter engraves the windings, while the tube rotates slowly back and forth. For special purposes a modern spot welding department is positioned next to the Lath Shop.