WIAP® Werkzeugmaschinen

Umbauten, Erneuerungen, Retrofit

Photo report remodeling Karusell WU240

Vertical lathe TITAN

CNC grown and commissioning of WIAP in Angola.

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Task: The conventional vertical lathe TITAN is to get a new CNC control with ball screw spindles and feed motors and covers. Incl. a partial revision. The machine was ordered in Denmark with a machine dealer. The dealer has then begun with the conversion but the control never grown nearly 1.5 years there have been delays because no man Siemens was available for Angola for the commissioning and training. The WIAP has taken over the job where Sven Widmer and Hans-Peter Widmer (WIAP) made the work. When dismantling the WIAP was not involved, making it difficult to build something, but was realized despite the well. The electrical part was completely prepared by WIAP. Planned and built the Caroline Widmer Widmer and Jim have in Switzerland. The add-on material has been brought to Denmark and loaded into the container with the machine. In Angola, Luanda positioned and attached the new CNC control with the motors. The start-up carried out, shot the first turning members and the people enrolled.

Figure 1: Former conventional TITAN VTL from Europe, in Angola converted to CNC control.

Image: 2 Search First, what was so from under the dust. By the anti-rust "Tektil" almost everything looks so, as if it were rusty.

Figure 3: The cross bar was also completely protected against rust. Thus, the machine is transported from Denmark to Angola Luanda in a container which could be opened from above.

Figure 4: The guides are deducted before assembly, so that no damage caused by violations of the land done.

Figure 5: Setting up phase second

Figure 6: He is, but it was a lot of work, because the crane hook is only 4.8 meters and the side stand is 3.8 meters high, minus the bar, which one needs to set up.

Figure 7: Now the second side stand is mounted.

Figure 8: The side stabilizer below.

Figure 9: The roof and the interconnection with the intermediate plate, so that a good retraction

exclude tilting. The roof is connected with 18 pieces. M36 screws.

Figure 10: Here keep two men meet with two woods, so that the roof does not swing. Finger near are at risk.

Figure 11: reindrehen With the 55 mm socket and ratchet the screw's one, but still re-cut threads in the roof is then exhausting.

Figure 12: As small as the man's down there, so the machine is very high!

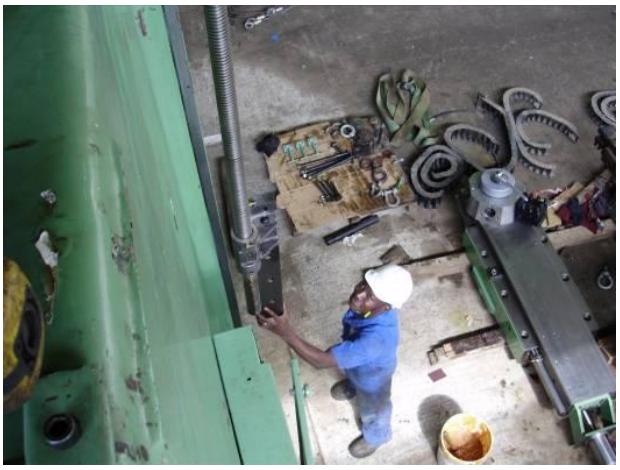

Figure 13: When mounting fear of heights is not suitable ..

Figure 14: The Machine Head is mounted. A good thing, because after all, motors and spindles are driven up there. It's all instinct work and think ahead a lot is needed. Many screws were missing, still had to be organized.

Figure 15: The threading of the various assemblies.

Figure 16: The transom is now above. He needs to be adjusted with a spirit level.

Figure 17: The carriage assembly. Despite Sunday when around 16 o'clock the work is finished. Here are 7 days / week, demanded.

Figure 18: The last serious part of the machine is mounted today. It was expensive to have the long member just in the crane hanging.

Figure 19: Here threading. With the long screws on it, that was only when we anpeilten first without screws, just the middle with the crane.

20: So the machine looked after 6 days. Much body work and climb and knowledge of crane handling. And secure assemblies, etc.

Figure 21: Sven Widmer when tightening the crossbar drive, after the pins have been set, we received from Switzerland, because many middle bolts were no longer available to the machine.

Figure 22: Previously a conventional vertical lathe and now new a CNC-controlled machine.

Figure 23: Start of the cabling. Sven Widmer in Angola

Figure 24: Installation of the panels and the gallows.

Figure 25: Specification of CNC supplements. finish cabinet and test.

Figure 26: programming on the machine. Difficult conditions: temperature above 30 degrees, now and then a sandstorm passing through the hall, because it is open on both sides, ie without doors. The lap top is always very dirty. Then the sun, impairing visibility often hindered.

Figure 27: The machine is taking shape. Soon all new cables are pulled. 2 axes are already running. We now travel back after 20 days and come back in about 2 weeks from mid-November, because we still need to test turning yes and schools.

Figure 28: In the follow-up inspection such scrapers found. This press is insufficient to take the lead and so dirt can by under the wiper.

Figure 29: Right of the turret, after a short time already rusty! The new cover must be drilled yet been determined.

Figure 30: The machine lost daily oil because it turned out that still had some errors on the machine.

Figure 31: As under the machine a side wave came in, which measures the speed via the bevel gear in the image.

BIId 32: The bay under the machine.

Figure 33: The bevel gear is pressed with spacer rings up so it was backlash.

Figure 34: The cast iron lid down was broken. Then two spacers were fitted and these were 2mm too thick, meaning it pressed with full force against the bevel gear. We made a new cover and a spacer ring 2 mm thinner, so it had little game. The O ring in the lid was not fitted. So explained that the oil ran out.

Figure 35: This wave was still about 4 mm long. So we shorten the shaft by a few mm so that the cover also has sealed properly.

Figure 36: The section of the shaft.

Figure 37: Emergency Stop buttons attached yet, so that when a man is in the machine, he can press the emergency stop.

Figure 38: The cultivation of an automatic lubrication. The lubrication pump we have once again renewed with pressure switches and level switches, so that pressure line faults are detected at the control.

Figure 39: Many defective lubricating parts were replaced.

Figure 40: New and old grease mixed components.

Figure 41: The two emergency stop buttons on the crossbar. we hope they will never need.

Figure 42: Now a large workpiece is placed on the face plate.

Figure 43: If Cylindrical is rotated with a carousel and in the case it was now 0:15 mm to 260 mm conical, ie always look at the radius, it is 0.07mm to 260 mm. This has now been adjusted.

Figure 44: With the oil honing the table is deducted. Important to always deal with great care with the table and guides.

Figure 45: measuring with the frame level on the face plate.

Figure 46: Consideration will be given to the frame-bubble level, as the faceplate is. We assume, as a rule, always a level with the accuracy of 0.05 mm per meter (0:02 is better, but is also very sensitive. Reacts instantly to sunlight.)

Figure 47: The transom is also checked. If that's not good, it can be set up on the shaft. But since you have to first make a plan rotation.

Figure 48: If it is possible to take a good reference surface to check with the spirit level the straightness.

Figure 49: checking whether the RAM is in the water.

Figure 50: The RAM has a pivot point and the center of exactly 260 mm as long as the rotating surface, do the clock. Always remember that we turn radius and measure diameter, ie the error is 260 mm non-0.15mm, ie adjust only 0.075 mm. And is adjusted. The RAM has for this adjustment above a rotating screw.

Figure 51: After adjusting the screws 4 are front retightened on RAM.

Figure 52: Now is then driven down a maximum maximum up to the cross beam to control the end positions switch.

Figure 53: The plunger was long. Among the guides rust. This has then been involved, since it had no oil!

Figure 54: Now a large workpiece is placed on the face plate.

Figure 55: Good approximately align with the four claws robust box.

56: Okay, now the first rotation test can be started.

Figure 57: The machine just before the handover to production.

Figure 58: A very good, robust, heavy machine, which came with Bulgarian origin from the old Soviet era was converted from Conventional to CNC.

This reconstruction showed that conventional machine to CNC can be upgraded. The cost ceiling moves usually in one-third of a new machine.

The WIAP AG continues to expand its machine tools and has a subcontractor base. whether New equipment or modifications; it will be in the Rule everywhere uses the same internal components. Thus, the spare parts warranty is secured.

When WIAP AG are not only the elderly, who can do that. For years, WIAP has this Training intensified for the cockroaches. There are always two shaving machines at hand.

The cost of a retrofit (conversion with override)

towards a new machine is about 40 to 60% of a new machine, because the basic meat is available. Only an exchange of CNC without drives what is possible today, with analog drives can often even below 10 to 20% of the machines are made new purchase value. Even then it has built the newest CNC control on the machine so that the operator does not feel he has an old machine.

Thanks to the WIAP alarm system design prevents incorrect operations and not know how to do something, backed with messages. This results in a very simple operation for all employees who work on a retrofitted by the WIAP machine. Thus its pleasure to work with the machine.

End tag Retrofit of Fujii Seiki lathe Oelfedl

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WIAP ® AG Ltd SA
Industriestrasse 48L
CH-4657 Dulliken

Phone: ++ 41 62 752 42 60
Fax: ++ 41 62 752 48 61
wiap@widmers.info
www.widmers.info / www.wiap.ch