

## CPCF Stage 2 Weights and Measures Reflective Statement

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It had been a hard piece of kit to find, an Automatic Gravimetric Filling Instrument, but I persevered. I needed this for my portfolio, and I was going to stop at nothing until I found one.

God, but when I found one the panic really sank in. Intimidating, I thought as I scoured OIML R-61 trying to wrap my head around the testing procedure. Hm, bingo! Knowledge hub – great open discussion and even a template verification form which I amended for the task at hand.

Details of the equipment requested from the trader, check. Time to see if we had an appropriate control instrument. Right it must have an error no greater than one fifth of the max permissible deviation and maximum permissible pre-set error of the fills under test. We have one! Great. I made sure that it was calibrated with working standards weights prior to the inspection. With that sorted I arranged a date for the inspection – I selected a date that was a couple of weeks away to allow me enough time to do my research.

Time to put some work in, hours really, making sure I fully understood the testing required, the accuracy classes, the difference between those and the reference classes and the markings. By this point, I must've been able to recite OIML R-61 in my sleep. Okay, it finally made sense – time to test my knowledge against a qualified Inspector internally and get a grasp of the practical limitations and difficulties the inspection might have but by George, I think I've got it.

As the trader had sent me the instruments details, I was able to calculate the number of fills I would need to test and the permissible errors prior to the inspection – that took some of the pressure off. Maximum permissible deviation from each fill from average.... Calculated. I even remembered to multiply the in-service inspection maximum permissible deviation by the class designation factor. A short lived boost to my confidence.

The day finally arrived... in at the deep end I thought to myself as we approached the business premises. I had driven past the premises many times, but never really knew what lurked inside... As a Trainee Inspector, I had been out with qualified Inspectors on countless visits, however, this was the first time I had organised and led an inspection on my own. Scared? Yes. Nervous? Yes, but what I lacked in confidence I surely made up for in enthusiasm. The Inspector reassured me that they were there to spot me, but only as a last resort – was that reassuring? I think it might have made me feel worse in hindsight. Would I ever shake this imposters syndrome? I had to push these thoughts to the side so that I could concentrate on the task at hand.

One last chance to mentally go over my inspection plan before the baptism of fire. I am as ready as I will ever be. Let's get this done. The inspection begins.

A good introduction is always the best way to start. Notice of Powers didn't need issuing as the inspection was arranged previously, less paperwork – great. Mask, steel toe capped boots, goggles,

white coat, hair net, high visibility vest and a cap – wow I look the part I thought – at least this bit I was familiar with having undertaken inspections in busy premises before.

Right, first things first, warm up the instrument and check its markings and visual inspection.

- Name or identification mark of the manufacturer – yes
- Name or identification mark of the importer – yes
- Date of manufacture of the instrument – yes
- Serial number and type designation of the instrument – yes
- Product designation – yes
- Temperature range – yes
- Electrical supply voltage – yes
- Electrical supply frequency – yes
- Pneumatic/hydraulic pressure – yes
- Maximum fill – yes
- Rated minimum fill – yes
- Maximum rate of operation – yes
- Type approval – yes
- Indication of the accuracy class – yes
- Reference value for the accuracy class – yes
- Scale interval – yes
- Maximum capacity – yes
- Minimum capacity – yes

So many markings I thought to myself, and they are just the applicable ones to this specific instrument! I moved my way through my test record form. Something was missing though – the instrument didn't have the verification markings I would expect – nor did it look as though it had been secured in line with its type approval certificate. Unfortunately, due to the Coronavirus pandemic and the small space we were occupying the compliance manager wasn't around for me to make my enquiries. Time to be decisive, could the markings have been removed due to wear and tear? It was a slightly older piece of equipment, and I had determined that it was in use for trade, something didn't feel right. I decided to move on to the testing whilst we had everything set up, armed to ask these questions at a later time.

First things first, time to calculate the tare weight. I knew how to do this as I had done so many times before. Great.

Now to weigh the test loads. Practical issue brought to the forefront. Lifting 32 loads of 25kg, what was I thinking. One of the employees offered his assistance; crisis avoided – breathe! Records made for each of the test fills. Average calculated.

Time to compare the results with the requirements of OIML R-61. Max permissible deviation of fill from average was less than or equal to the required figure. Pass. Average minus pre-set value was less than or equal to the required figure. Pass.

Okay, the instrument was within the permitted errors for an in-service inspection – that's great but in the back of my mind I kept thinking, has this instrument ever been verified? I began doubting myself. Am I right? Should this instrument be stamped? I almost wanted to ask my observing officer. NO – I thought to myself, something isn't adding up.

I safely packed up the equipment and made my way to find the compliance manager.

I explained to the compliance manager that because they pack goods by weight using this instrument, it needs to be passed as fit for use for trade – this was also because they didn't undertake any final weight checks on a different piece of equipment, such as a verified NAWI. The compliance manager stared back at me blankly and stated that the instrument was calibrated every six months. Right let's try this again. I explained that this meant that it must have been tested by an inspector, a notified body or an authorised representative to ensure that it was working within the permitted errors when it was first placed on the market and that this process was separate to calibration. I went into further detail stating that when an instrument is passed as fit for use for trade, a certificate of conformity is issued. This document would relate to their specific instrument and include its serial number to state that it had been tested and conforms to the standards and tolerances required at verification stage. It would also check that the instrument matches the declaration of conformity and the type examination certificate.

In the back of my mind all I could think of was that this situation perfectly highlights the issue with self-verification. It had allowed an unstamped piece of equipment to be placed on the market for years. This coupled with changing departmental priorities had meant that the trader hadn't been visited in this time and that the issue had not been discovered.

It was impossible to tell at this point whether this had been deliberately done by the trader – maybe to allow for a price advantage due to the difference in cost for stamped vs unstamped equipment? Or was it a genuine oversight? Either way, the instrument needed to be verified. What were my options? If I prevented the business from using this piece of equipment, they wouldn't be able to trade. Would it be proportionate to allow the trader to continue to use the instrument for a short period until verification took place? The instrument was within the in-service permissible errors and it had recently been calibrated. The financial cost of having the instrument verified seemed like an appropriate penalty for failing to do so in the first place. It felt like my mind was racing a mile a minute. I paused. I was happy to allow the trader to continue to use the instrument, as long as it was verified as soon as possible. I took a second to run this past the inspector present, hoping for a reassuring nod, there it was – they agreed with my course of action. I ensured that all of this information was put in writing to the trader for their records and logged the details on our internal system.

The trader promptly organised for the manufacturer, who I checked was an authorised representative, to come and verify the instrument within a week.

Less than a week later, I received the certificate of conformity, just as expected.

As we were leaving, I wondered whether I had forgotten anything in the confusion of it all, the inspector with me had remained silent, I must have done what was required of me.

Finding out that I was to undertake this inspection completely filled me with dread. My entire experience of weights and measures had been throughout a pandemic. I didn't feel ready and couldn't understand why I had been put in this position when I didn't feel capable. I tried to offset these feelings of doubt by making sure I was completely prepared – by knowing that I had the support of the department, and my allocated inspector if I needed it and by making sure that I knew the legislation like the back of my hand (*OIML R-61 was simple enough but for automatic gravimetric instruments the applicable legislation could have been the Measuring Instruments Regulations 2016, The Weighing Instruments (Automatic Gravimetric Filling Instruments) Regulations 2006, The Weighing Equipment (Automatic Gravimetric Filling Instrument) Regulations 2000, or The Weighing Equipment (Filling and Discontinuous Totalising Automatic Weighing Machines) Regulations 1986 – so just a few!*)

Although I knew the above, I couldn't help but feel like I was a bit of a fraud. A trainee dressed up as an inspector. I failed to see that at the time, the only way to really feel like an inspector, was to become one. To be supported by the department and empowered to be able to make decisions like the above for myself.

I didn't for a second think that I would be walking into a situation whereby the instrument wasn't even verified – and no amount of reading or preparation could have equipped me for that. Managing that situation could have only come from first-hand experience. In retrospect I am glad that the inspector allowed me to form my own opinion without stepping in. This put the pressure on me to think on my feet and I was equally glad that I was able to run my thought process past them before making the final decision. However, at the time, all I wanted was for the inspector to take over – they had been in a similar situation before and they knew how to handle it – but they trusted that I would be able to handle it as well.

This visit taught me that businesses, no matter how large or small, may not fully understand the requirements that the instruments that they use have to comply with. As well as that, the compliance manager that I dealt with wasn't really sure of the language I was using. In visits since, I have made sure to tailor my vocabulary to the level required for the person I am speaking to.

Sometimes, I think about this visit. I think about the unease in my stomach beforehand and the anxiety but then I take a moment and think about how empowered I felt afterwards. I came to the correct decision, all on my own. It was the first time I felt like I had known enough and had enough experience to become a competent inspector of weights and measures.