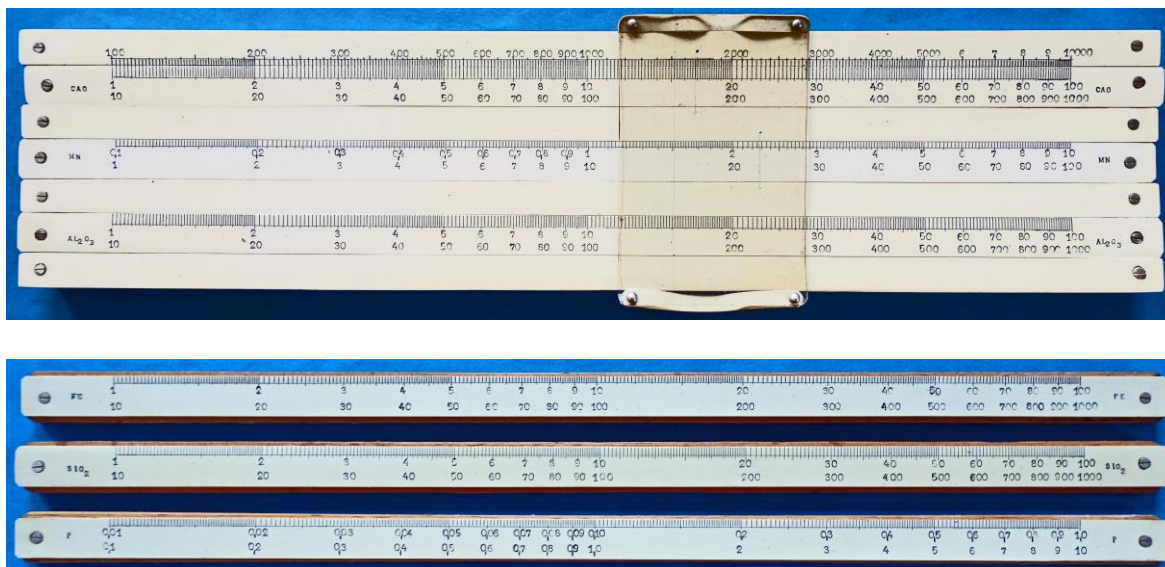


Nr. 5. ALKU Mystery Chemical Rule

Owner: D. Rance

Pictures:



Purpose:

Possibly chemical related - *Al*, *Si* and *P* all appear on **row 3** and *Ca*, *Mn* and *Fe* all appear on **row 4** of the periodic table of chemical elements. Such elements are used in pottery for **ceramic glazes**. But a more likely use is for determining the desired properties of **mixes of concrete** and/or **alloys of aluminium**. For example, there are striking similarities to the 25cm Hemmi duplex model 405 for Portland cement.

However, apart from speculating on a possible use for concrete or aluminium and deducing that three pairs of scales are for chemical elements and the other three pairs are for oxides, it is unclear what business or trade would need such a slide rule or how it was supposed to be used!

Description

An oversized (29.8 x 6.7 x 2.3 cm) closed frame 25 cm poly-slide (3) rectilinear model with incised celluloid veneers fixed to the stock and the slides by German silver screws. Apart from the scale annotations and labelling, there are no other markings. The back of the stock is varnished but plain. Otherwise the construction and finishing is poor but this is probably a reflection of the centralised socialist control the Duitse Demokratische Republik (DDR or East Germany) regime placed on ALKU (see "Manufacturer").

The simplex free-view plastic cursor (5 x 7.5 cm) has one non-central hairline (drawn at 1.5 cm in from the left-hand edge) and two peripheral hairlines (one drawn at 2 cm and the other at 3.5 cm from the left-hand edge).

Layout and scales:

All the scales are logarithmic and apart from the top 25 cm 2-cycle A-like scale (scale divisions labelled 100-1000-10000) the other 12 scales appear chemical related. There is a

pair of special scales on each side of the 3 duplex slides. But it is only possible to conventionally “calculate” with the uppermost/1st slide as only it can accurately interact with the adjacent A-like scale. It is unclear if the slides had fixed stock positions or were intentionally interchangeable.

The scale layout of the three slides (top to bottom – front and back) is:

1. **CAO** (possibly Calcium Oxide/Quicklime – chemical symbol CaO)
 - (i) 2-cycle B scale
 - (ii) 2-cycle B-like scale (scale divisions labelled 10-100-1000)
2. **MN** (possibly Manganese – chemical symbol Mn)
 - (i) 2-cycle B-like scale (scale divisions labelled 0.1–1-10)
 - (ii) 2-cycle B scale
3. **Al₂O₃** (probably Aluminium Oxide/Alumina - chemical symbol Al_2O_3)
 - (i) 2-cycle B scale
 - (ii) 2-cycle B-like scale (scale divisions labelled 10-100-1000)
4. **FE** (possibly Iron – chemical symbol Fe)
 - (i) 2-cycle B scale
 - (ii) 2-cycle B-like scale (scale divisions labelled 10-100-1000)
5. **SiO₂** (probably Silicon Dioxide/Silica or sand – chemical symbol SiO_2)
 - (i) 2-cycle B scale
 - (ii) 2-cycle B-like scale (scale divisions labelled 10-100-1000)
6. **P** (possibly Phosphorus – chemical symbol P)
 - (i) 2-cycle B-like scale (scale divisions labelled 0.01-0.1-1)
 - (ii) 2-cycle B-like scale (scale divisions labelled 0.1-1-10)

Designer:

Nothing is known.

Manufacturer:

German maker **Alfred Kuhmann** (ALKU). Post WWII Kuhmann set up a modest slide rule business and workshop in Neueibau - a small village in the Löbau-Zittau district of Saxony that borders modern-day Poland and the Czech Republic. In 1949 Neueibau became part of the DDR. Kuhmann only stayed in business for a short time – from 1947 to 1950.

Remarks:

Early ALKU models used printed cardboard strips for the scales. These were glued onto a glass baseplate for the stock and a glass strip for the slide. This mystery ALKU is a late production model made from wood – probably beach.