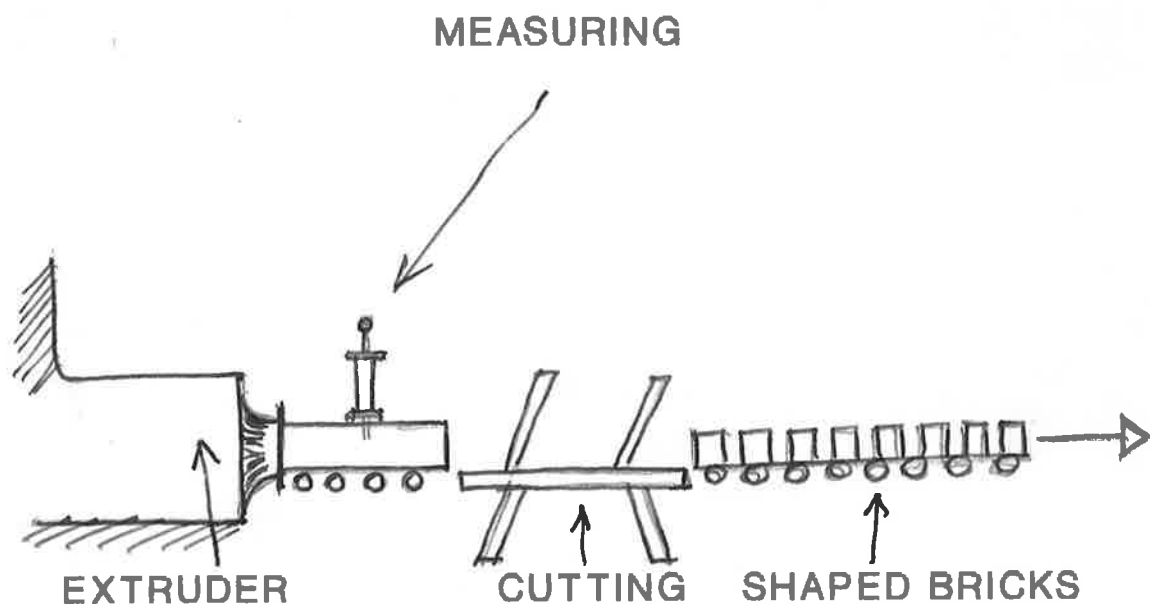


PEARSON PLASTIMETER

- * SPECIALLY DESIGNED FOR EXTRUSION PROCESSES
- * NO PREPARATION OF SAMPLES
- * VERY SIMPLE TO OPERATE
- * SIMPLE DESIGN, CAN BE FABRICATED LOCALLY
- * DIRECT READING



OTHER METHODS FOR QUALITY CONTROL IN THE PRODUCTION PROCESS

- **DRYING SHRINKAGE**

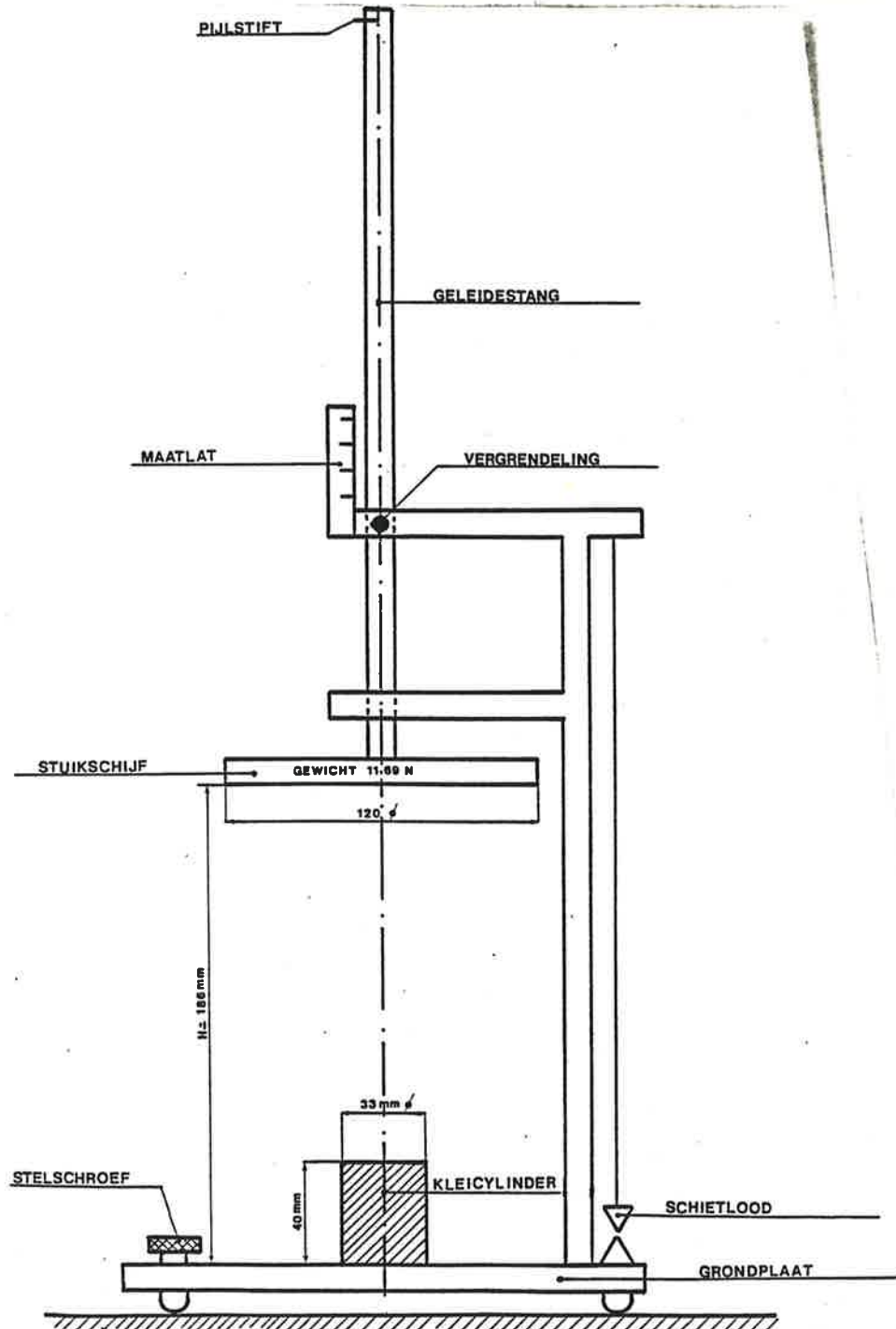
- **FIRING SHRINKAGE**

- **WATER ABSORPTION**

- **STRENGTH**
 - **3 - POINT BENDING STRENGTH (M.O.R.)**

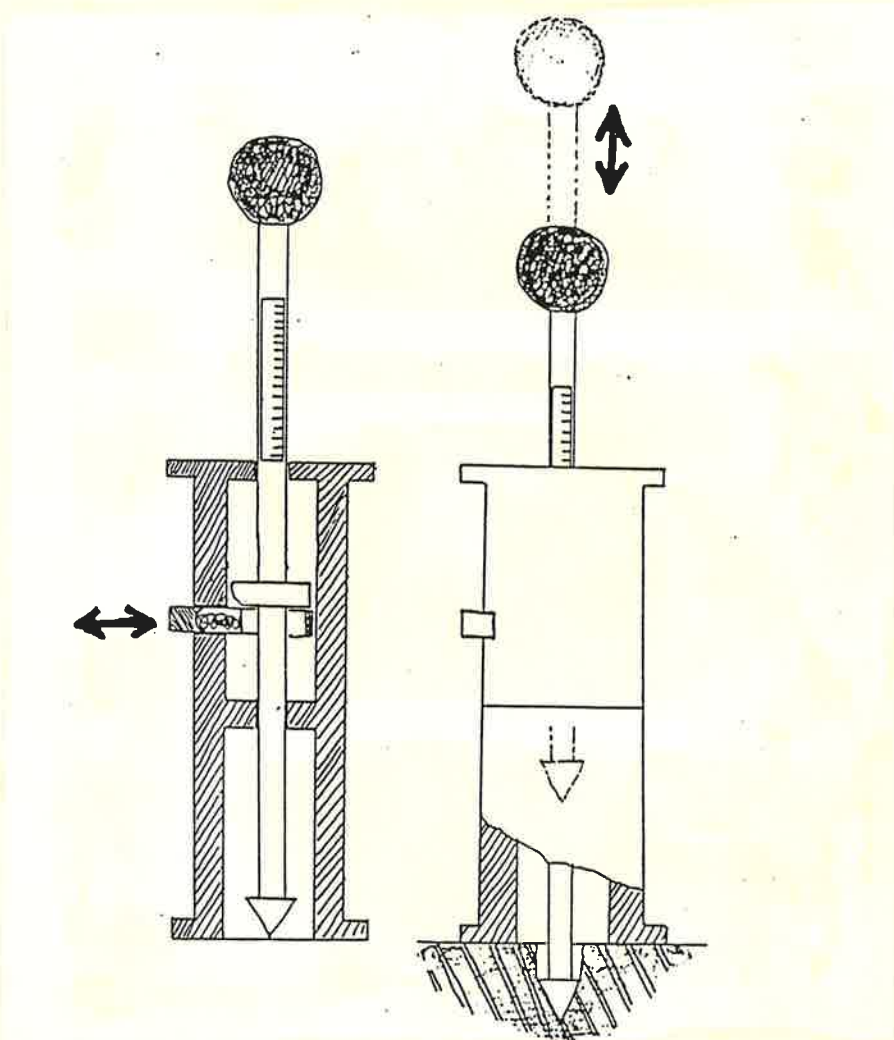
 - **CRUSHING (COMPRESSION) STRENGTH**

PFEFFERKORN DEVICE

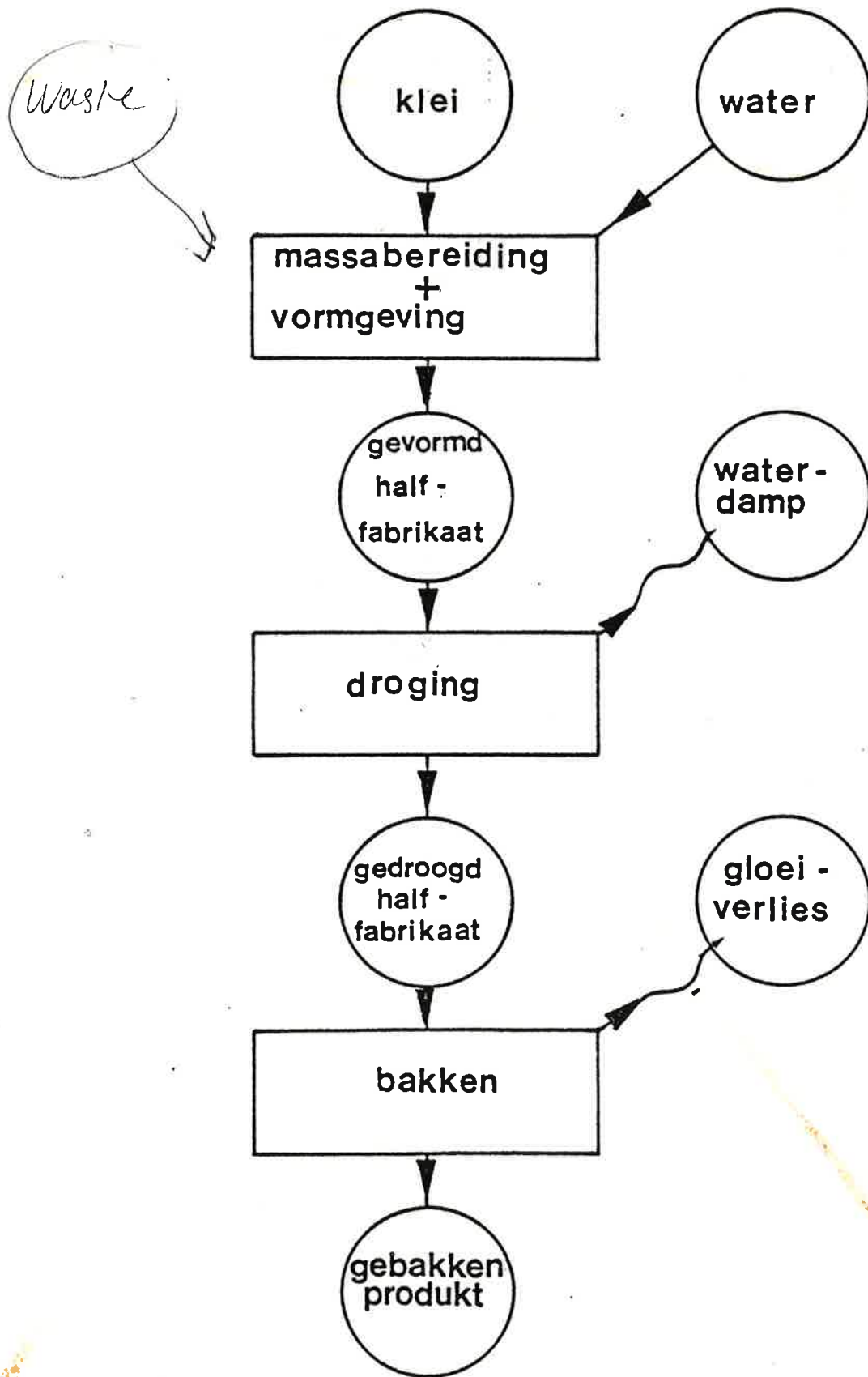


PEARSON PLASTIMETER

12E



fabricageschema van grofkeramische producten



DUTCH STANDARDS FOR BRICKS

**MOST BUILDING PRODUCTS INCL. BRICKS
HAVE TO BE CERTIFIED**

ACC. TO DUTCH (EUROPEAN) STANDARDS

REQUIREMENTS DEPENDS ON USAGE / DENSITY

	CRUSHING STRENGTH N/mm²	BENDING STRENGTH N/mm²
INNERWALLS	min 5 - 10	min 0,3 - 0,5
FACING BRICKS	av. 12,5 - 25 min 7,5 - 15	min 0,3 - 0,8
HEAVY DUTY	av. 30 - 60 min 20 - 40	min 1,0 - 2,0
(waterabs. max 20 - 30 %)		

REQUIREMENTS FOR CERAMIC MASSES IN BUILDING CERAMIC INDUSTRY (WINKLER, BRD)

	<u>fraction < 2 um</u>	<u>< 10 um</u>	<u>> 20 um</u>
FACING BRICKS	10 - 49	15 - 74	< 70
HOLLOW WARE	20 - 50	30 - 75	< 60
ROOFING TILES	23 - 51	35 - 77	8 - 48

**CRITERIA,
REQUIREMENTS FOR CLAY CONSUMPTION**

Basic

> AS RAW MATERIAL

- **PARTICLE SIZE FRACTION < 10 μm 8 - 70 %**
- **PARTICLE SIZE FRACTION > 250 μm max 20 %**
- **PARTICLE SIZE FRACTION 63 - 250 μm max 40 %**
- **ORGANIC MATTER < 3 %**
- **LIME STONE (calcium carbonate) < 25 %**
- **SHELLS 0**
- **THICKNESS OF CLAY LAYERS > 0,5 m.**

REQUIREMENTS FOR CERAMIC MASSES IN BUILDING CERAMIC INDUSTRY (DATA TNO)

PARTICLE SIZE FRACTION < 10 um

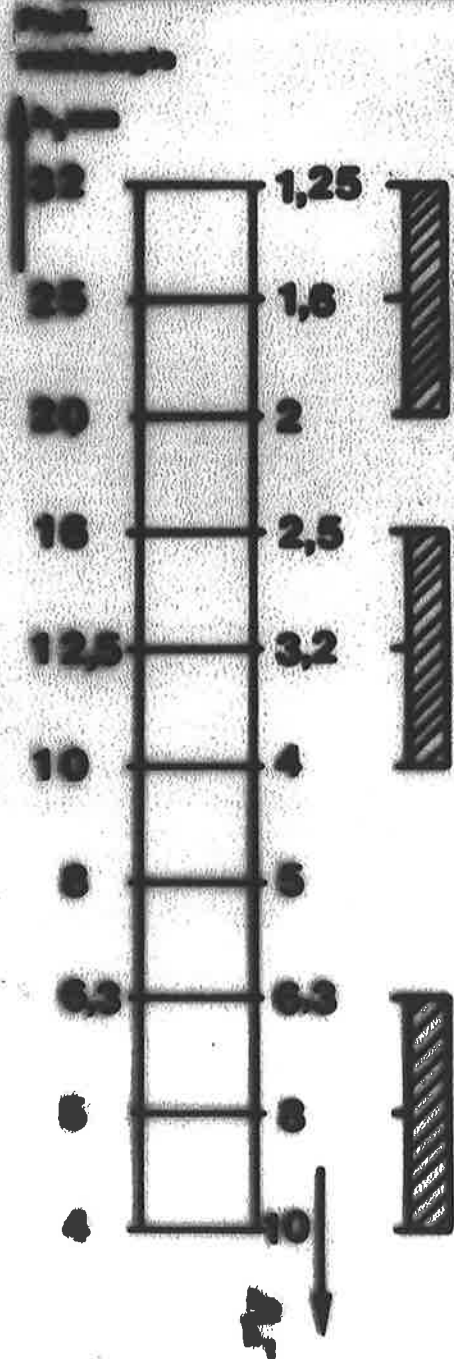
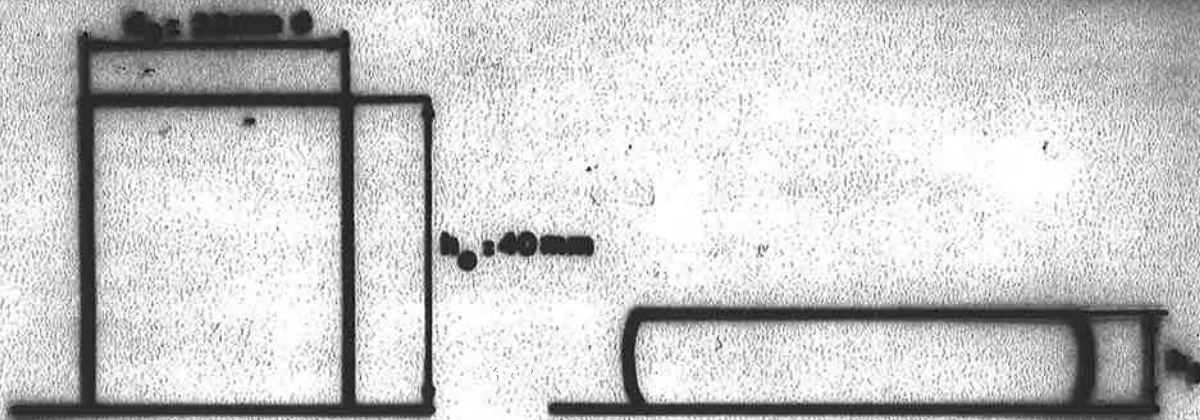
**FACING BRICKS (SOFT MUD)
(FLUVIAL CLAYS)** **40 - 42 %**

**FACING BRICKS (SOFT MUD)
(LOAMY SAND)** **22 - 30 %**

EXTRUSION BRICKS **40 - 50 %**

ROOFING TILES **50 - 57 %**

>>> DAILY MEASUREMENTS IN LABORATORY

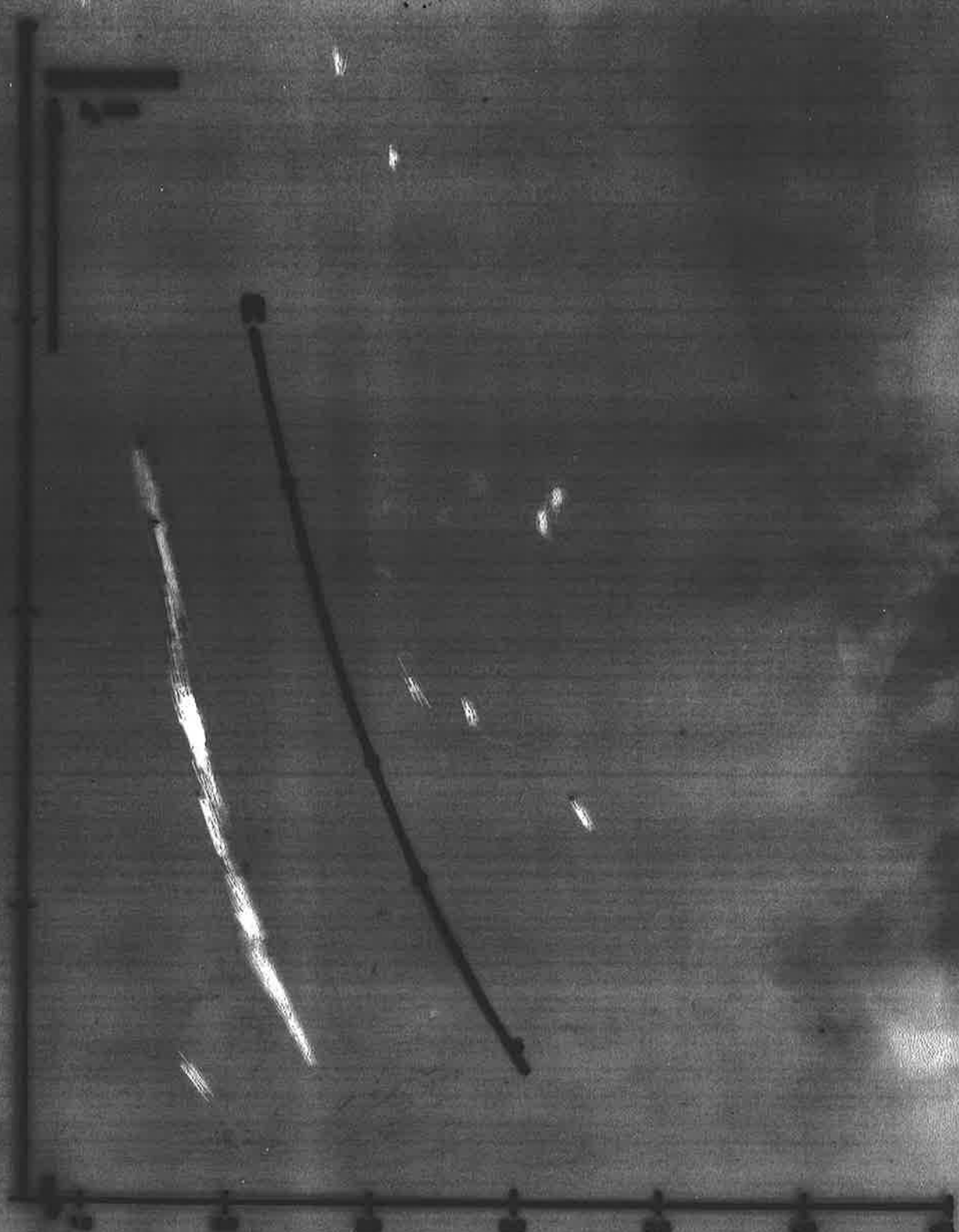


**STRENGPERSPRODUKTEN
DAKPANNEN**

HANDDRAAIWERK

VORMBAKSTENEN

Platt.
quotient



—————→ $\text{v. } \frac{1}{2}$

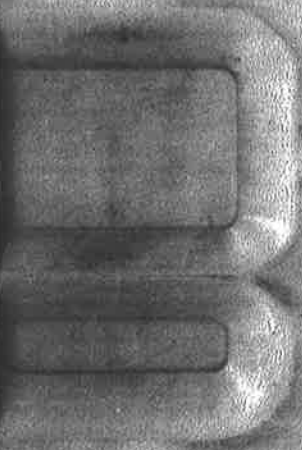
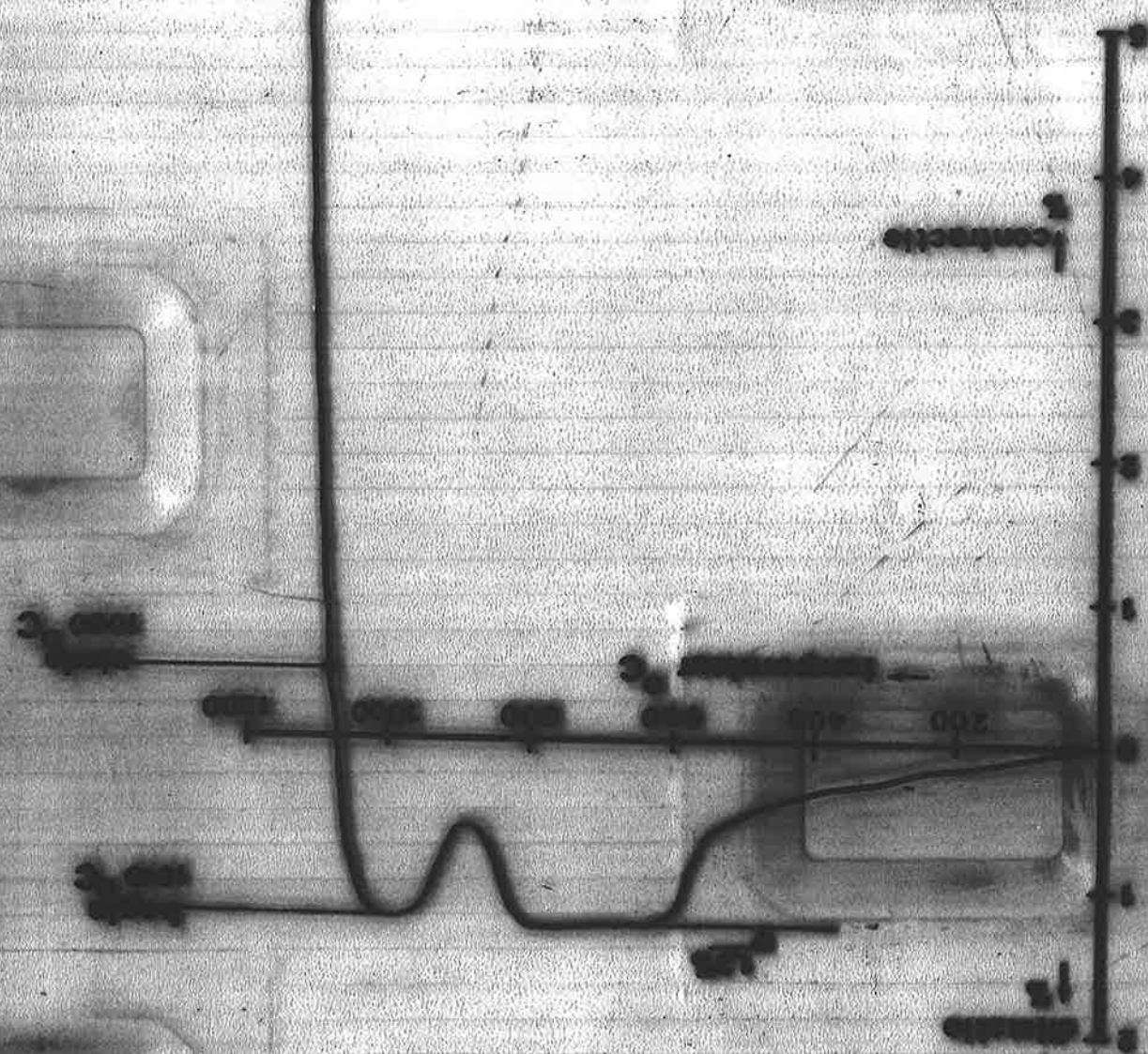
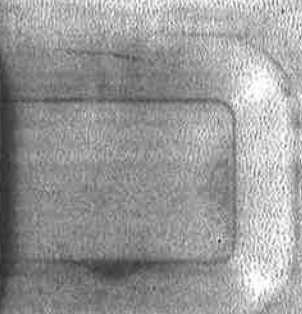
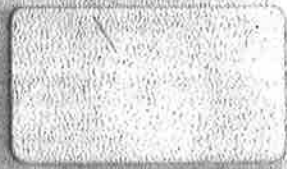
RELATE THESE EXPERIMENTS TO
CONDITIONS

SOME METHODS FOR DAILY MEASUREMENTS OF PLASTICITY

- **PFEFFERKORN**

- **PEARSON**

THE UNIVERSITY OF CHICAGO



PRODUCTION DATA (1992)**TOTAL PRODUCTION 1.200.000.000 BRICKS****60.000.000 ROOFING
TILES****CLAY CONSUMPTION 2.900.000 TONNES****ENERGY CONSUMPTION PER 1000 BRICKS****(IN M³ NATURAL GAS)**

1975 - 230

1990 - 170

2000 - 110