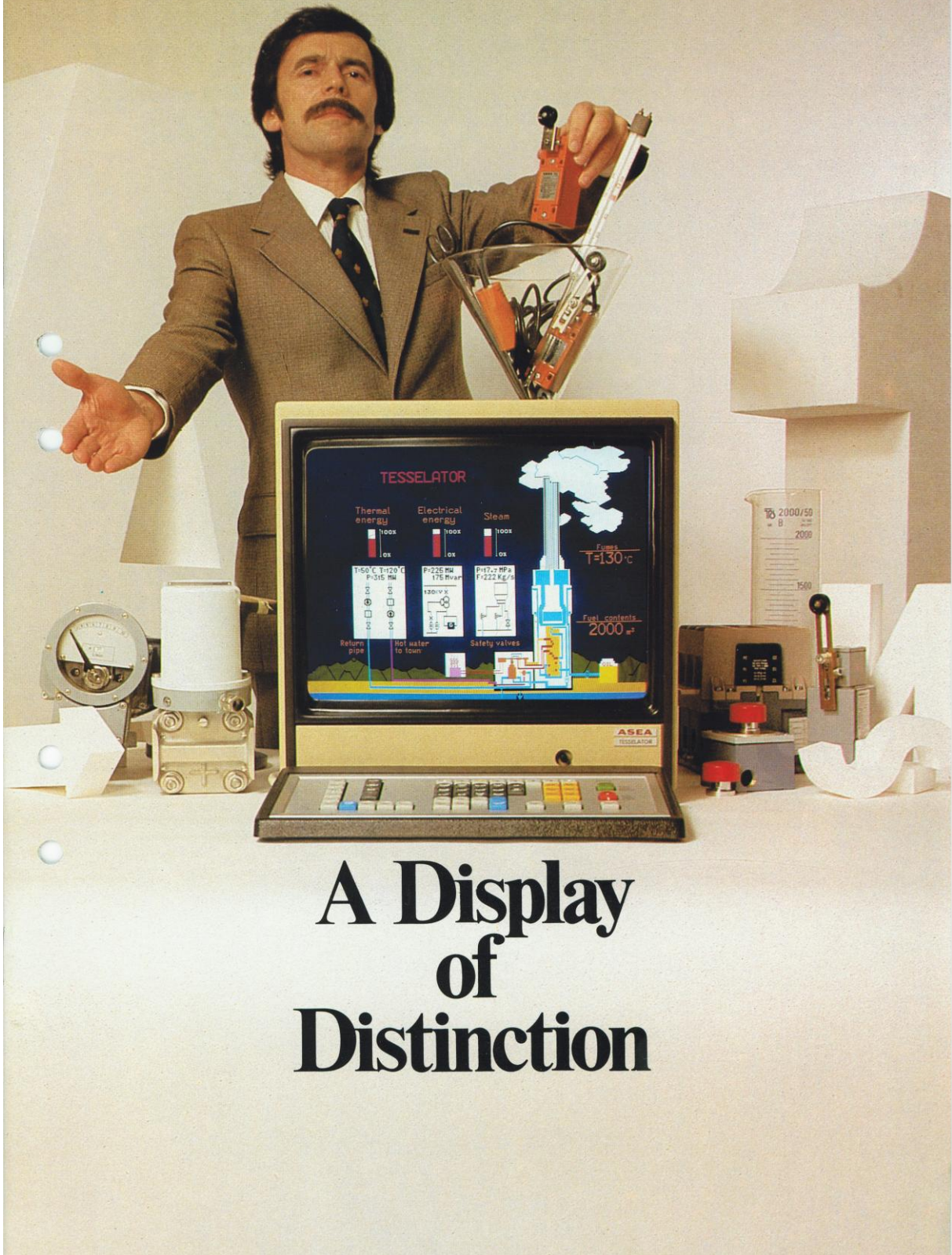


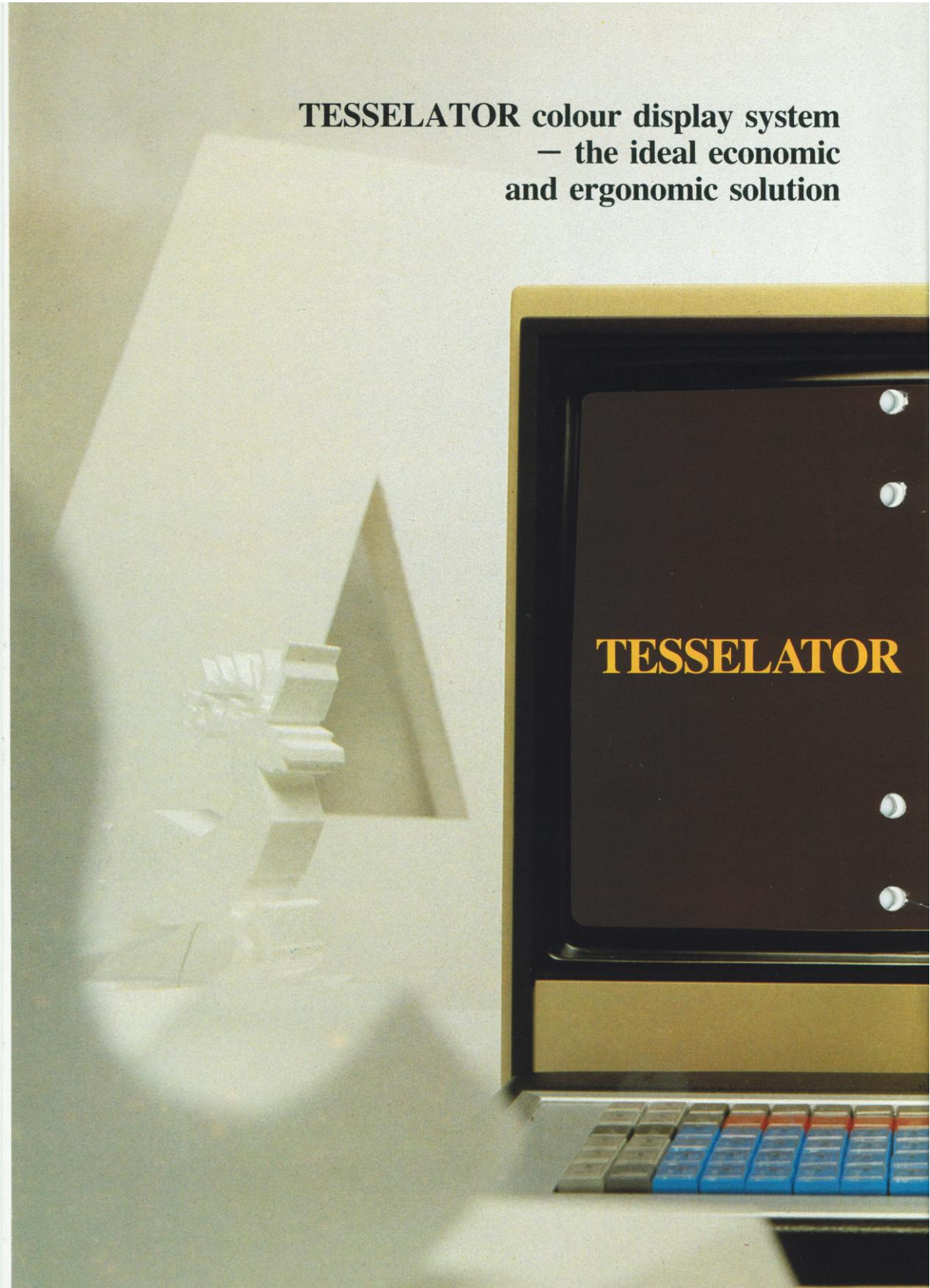
ASEA

Pamphlet YL 71-105 E



A Display of Distinction

**TESSELATOR colour display system
— the ideal economic
and ergonomic solution**



ASEA's TESSELATOR¹⁾ colour display represents an entirely new system in which the main features are legibility, simple composition of characters and symbols and ease of dialogue with the computer.

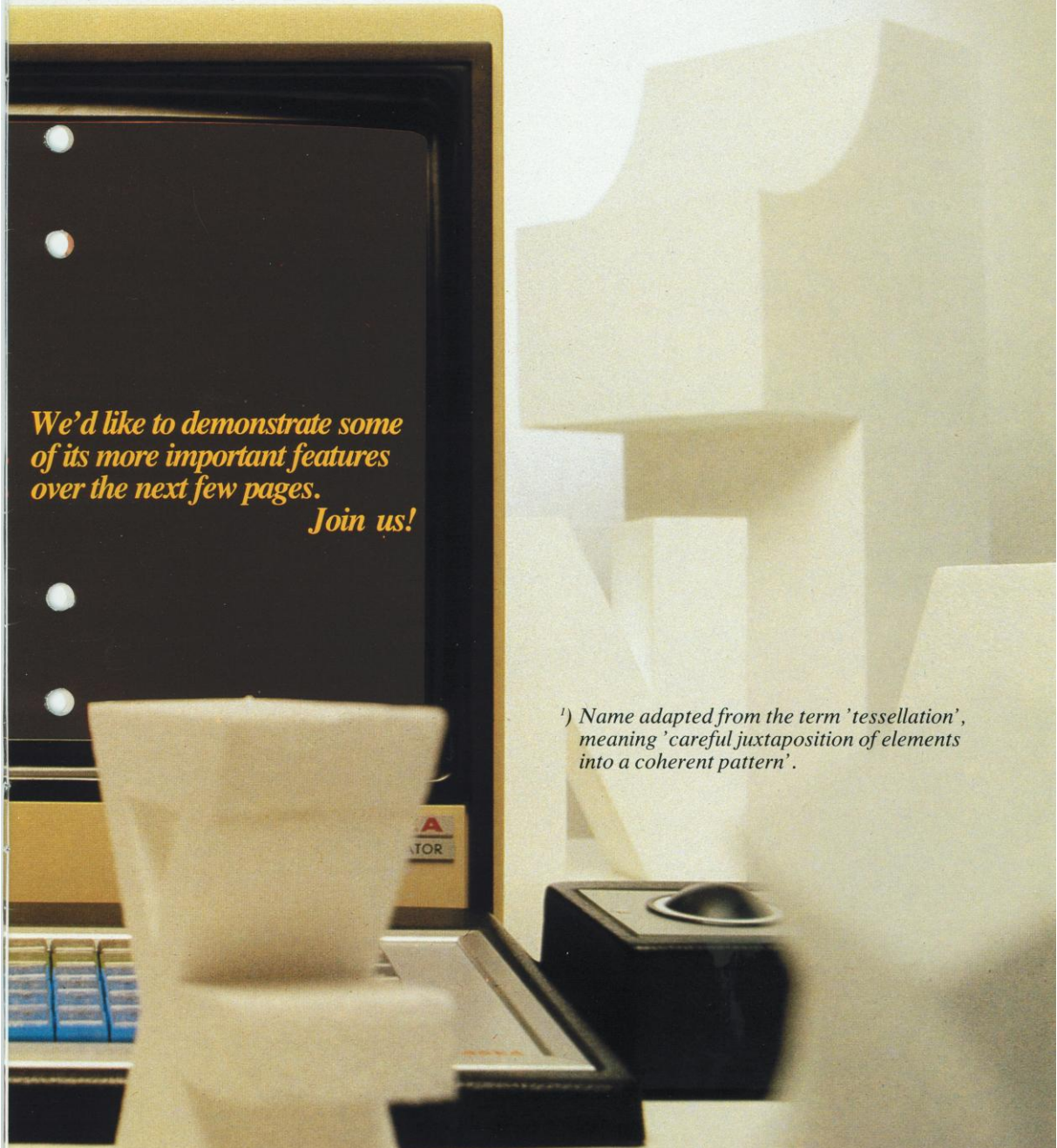
The weak link in communication between process and operator has always been the display. But no longer.

Our new colour graphics terminal provides the operator with a host of new opportunities to make his job faster, less tiring and more enjoyable.

We'd like to demonstrate some of its more important features over the next few pages.

Join us!

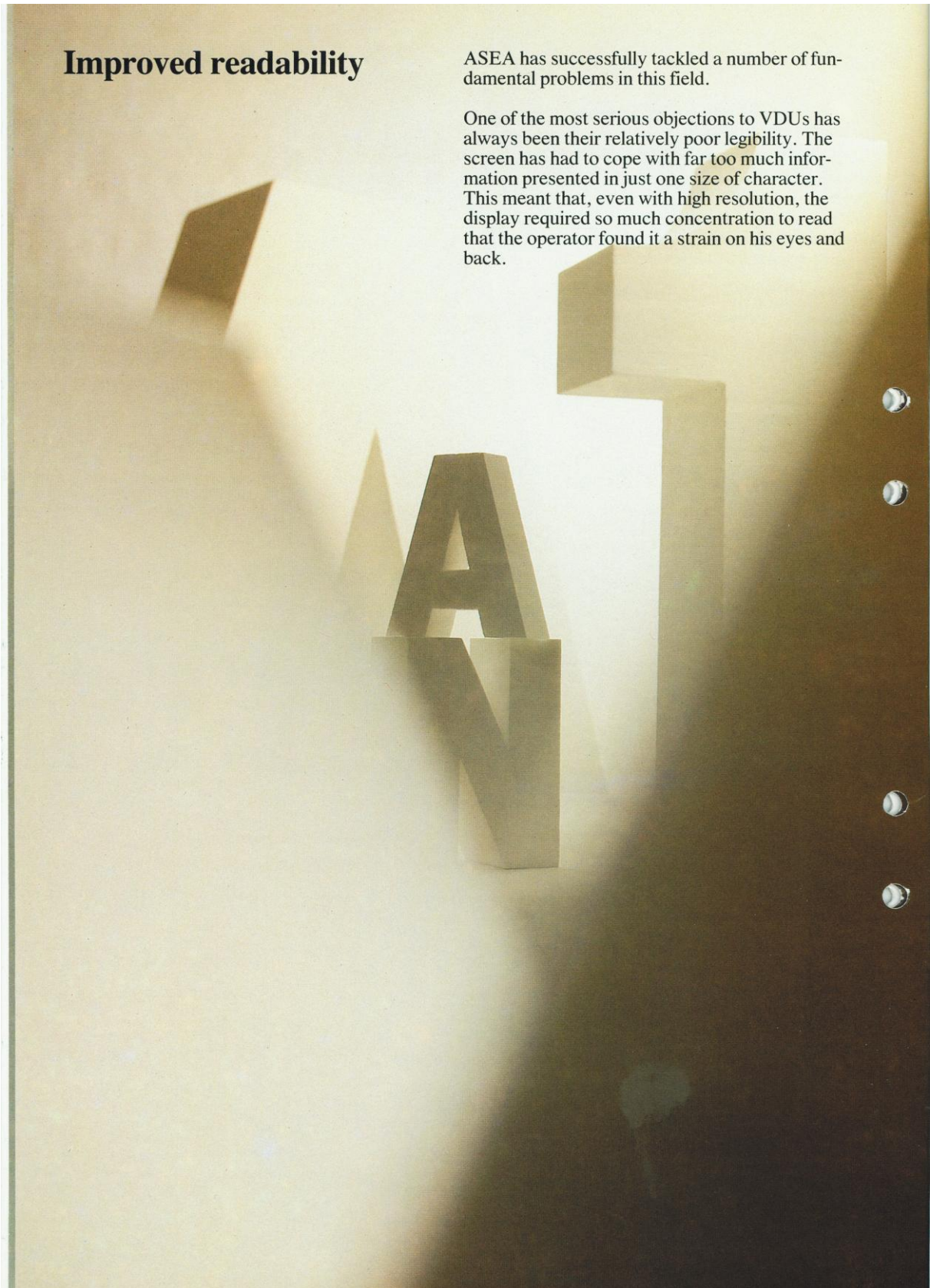
¹⁾ Name adapted from the term 'tessellation', meaning 'careful juxtaposition of elements into a coherent pattern'.



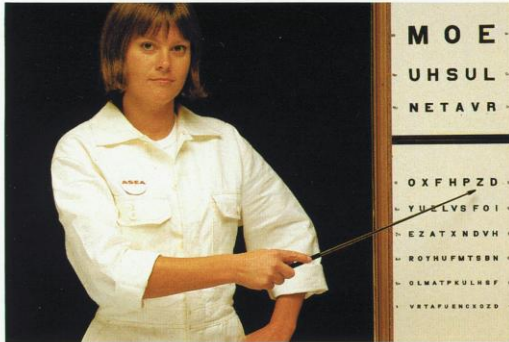
Improved readability

ASEA has successfully tackled a number of fundamental problems in this field.

One of the most serious objections to VDUs has always been their relatively poor legibility. The screen has had to cope with far too much information presented in just one size of character. This meant that, even with high resolution, the display required so much concentration to read that the operator found it a strain on his eyes and back.



To solve this, ASEA has seized on Man's amazing capacity to interpret pictures and patterns. In this way the graphics in a display can be tightly packed without diminishing readability. We have utilised this feature in our new TESSELATOR colour display system. The space thereby gained is used instead to increase the size of the most important facts and figures. Thus eye-strain is cut down, as well as the risk of costly misinterpretations. The perfectly uniform light distribution over characters also helps to create a crisp, distinct display.

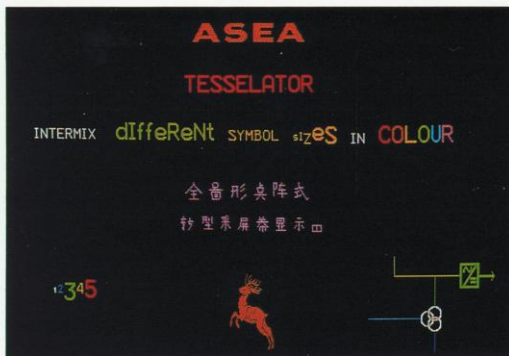


Large characters are easier to read – as anyone who has had his eyesight tested will know.

So our new colour display system does more than mingle large and small characters. Some of the other features at your disposal: a choice of foreground and background colours, two blink frequencies, 4:1 zoom function, comprehensive character repertoire, proportional spacing, choice of typography, trend graphs.



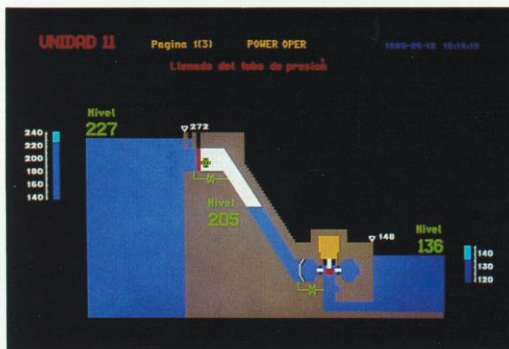
Headlines help us to pick out what we are most interested in.



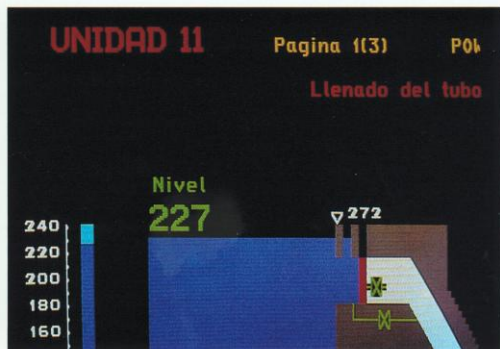
With ASEA's graphics display system, different sizes of characters can be mixed at will. TESSELATOR is the only symbol-oriented multi-colour system which can offer you this feature. (811206)



By forming your own symbols, you increase flexibility. Chinese characters can also be generated. (800153)



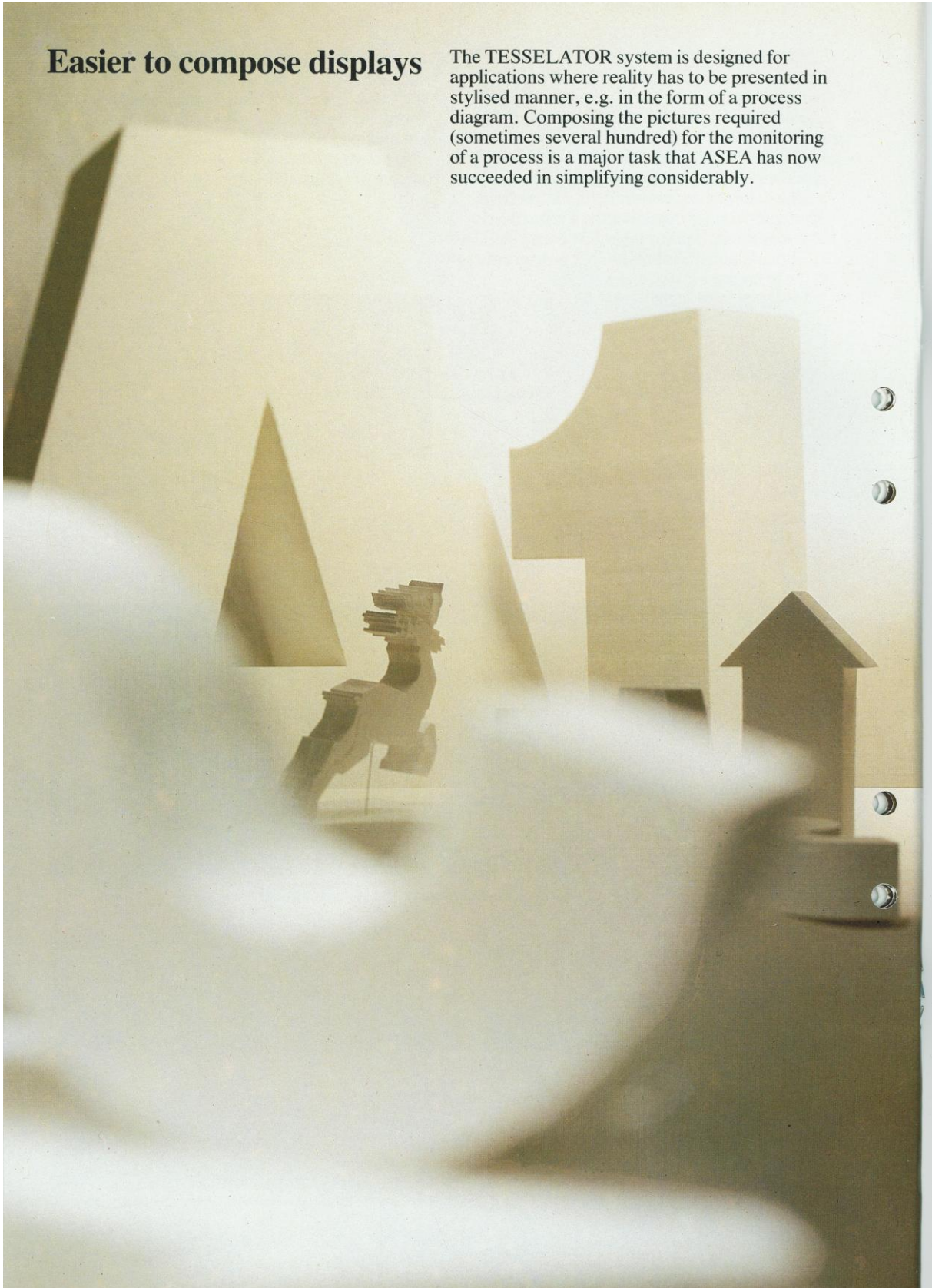
The graphic presentation can be generated to represent reality. The operator works with greater confidence. (800656)



To improve legibility still further, any quarter of the display can be enlarged. (800657)

Easier to compose displays

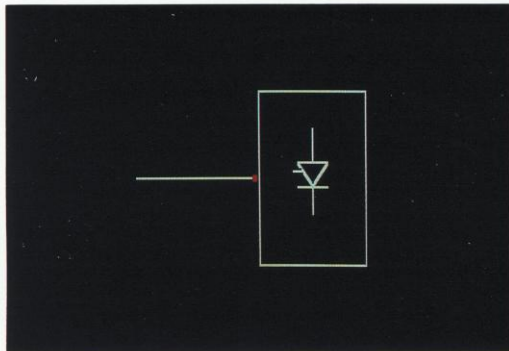
The TESSELATOR system is designed for applications where reality has to be presented in stylised manner, e.g. in the form of a process diagram. Composing the pictures required (sometimes several hundred) for the monitoring of a process is a major task that ASEA has now succeeded in simplifying considerably.



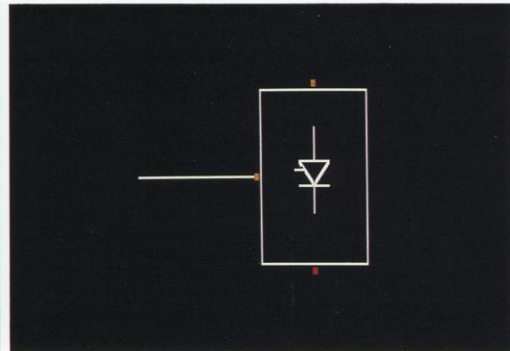
Picture composition takes place off-line with the help of keyboard and track-ball manipulator. Surveys have shown that this is the easiest, fastest and least tiring method. A large number of characters and symbols can be keyed in simultaneously, in four different directions. Writing in columns is thus just as easy as in rows. Irrespective of character size, the cursor moves to the next writable position.

In this system it is easy to design special symbols to comply with your own standards and draughting regulations. Complicated lettering, such as Chinese, is also possible. A patented new character generator makes this easy.

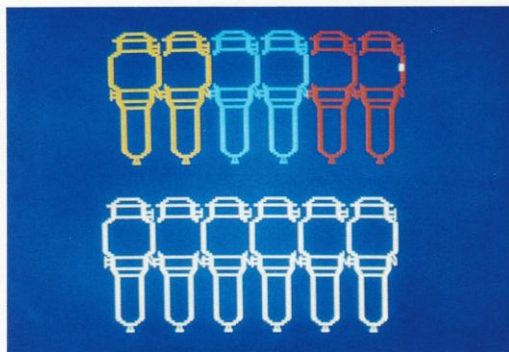
There are also a large number of editing functions, including window functions and cursor status aid.



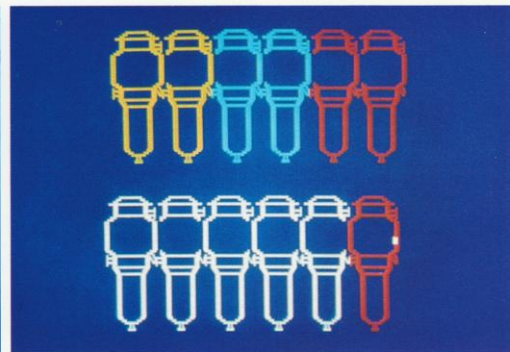
Each symbol is provided with inputs and outputs when it is defined. When forming the picture, the cursor moves automatically to one of



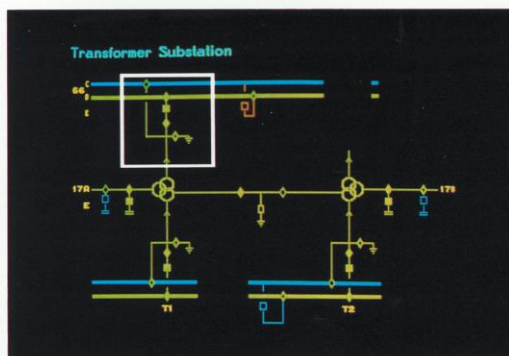
the symbol's logic outputs. The choice is dependent on the writing direction.



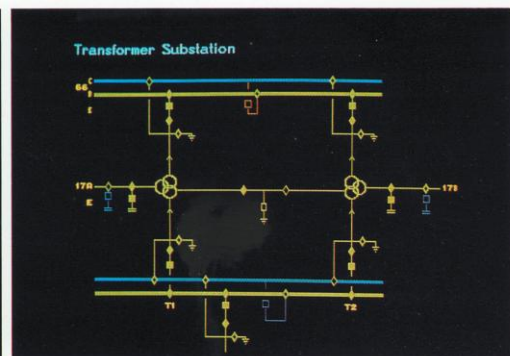
Various features are incorporated to facilitate the build-up of pictures. As an example, the colour can be transferred from one symbol



to another by pointing the cursor at the symbols, thus fetching and changing each colour.

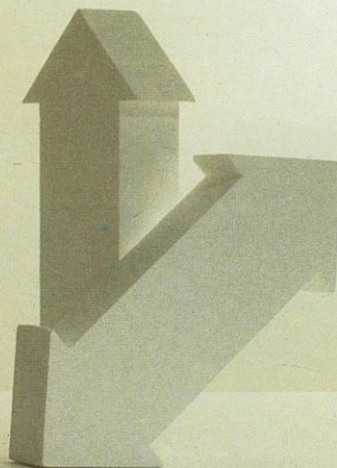


A window function can be utilised to generate pictures. Complex items can be copied anywhere on the screen.



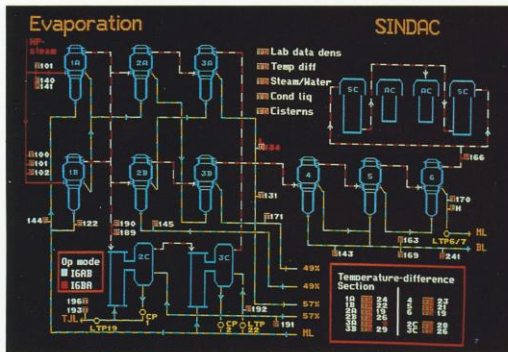
Easier dialogue with the computer

There are a great many colour graphics terminals on the market with attractive displays. But there is usually a major drawback: the display content cannot be readily interpreted by the computer, which does not have the ability – or the capacity – to do so. This is because it has to interpret every pixel in the build-up of a character and compare it with a stored pattern. This may require man-years of programming work, costly computer time and make man/machine interface more problematic.



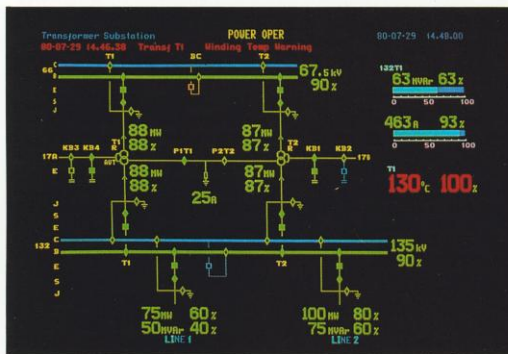
The TESSELATOR system supplies this missing link. It is symbol-oriented. This means that it gives the computer a description of the display content – not how all the characters are composed. Each character has just *one* code. This makes the dialogue between operator and computer much easier and faster without utilising so much computer time.

Various character sizes, colours, etc., are used to improve display legibility. But irrespective of colour, size and other variables the computer code for a character is of the same type. So the link is fast and uncomplicated. Altering, supplementing or erasing takes less than a quarter of a second.



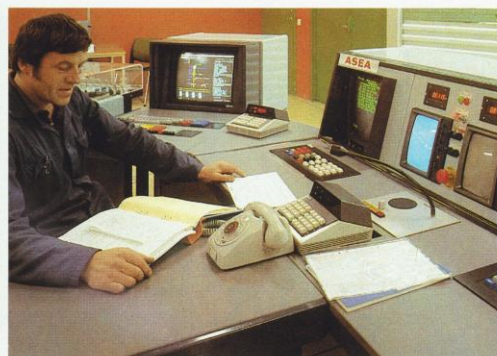
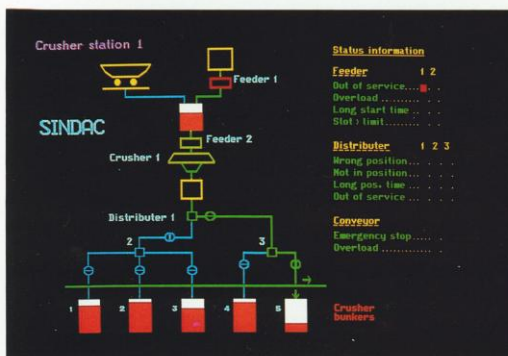
Pulp mills are becoming more and more complicated. Standstills can have serious consequences. It is therefore essential that process data

are presented in a clear and easily-interpreted manner for the operator.



The demands on availability in the field of electric power are very stringent. Erroneous operations can have severe consequences, par-

ticularly at the generating stations. Visual display terminals are an important aid in this respect. (800752, 791094)

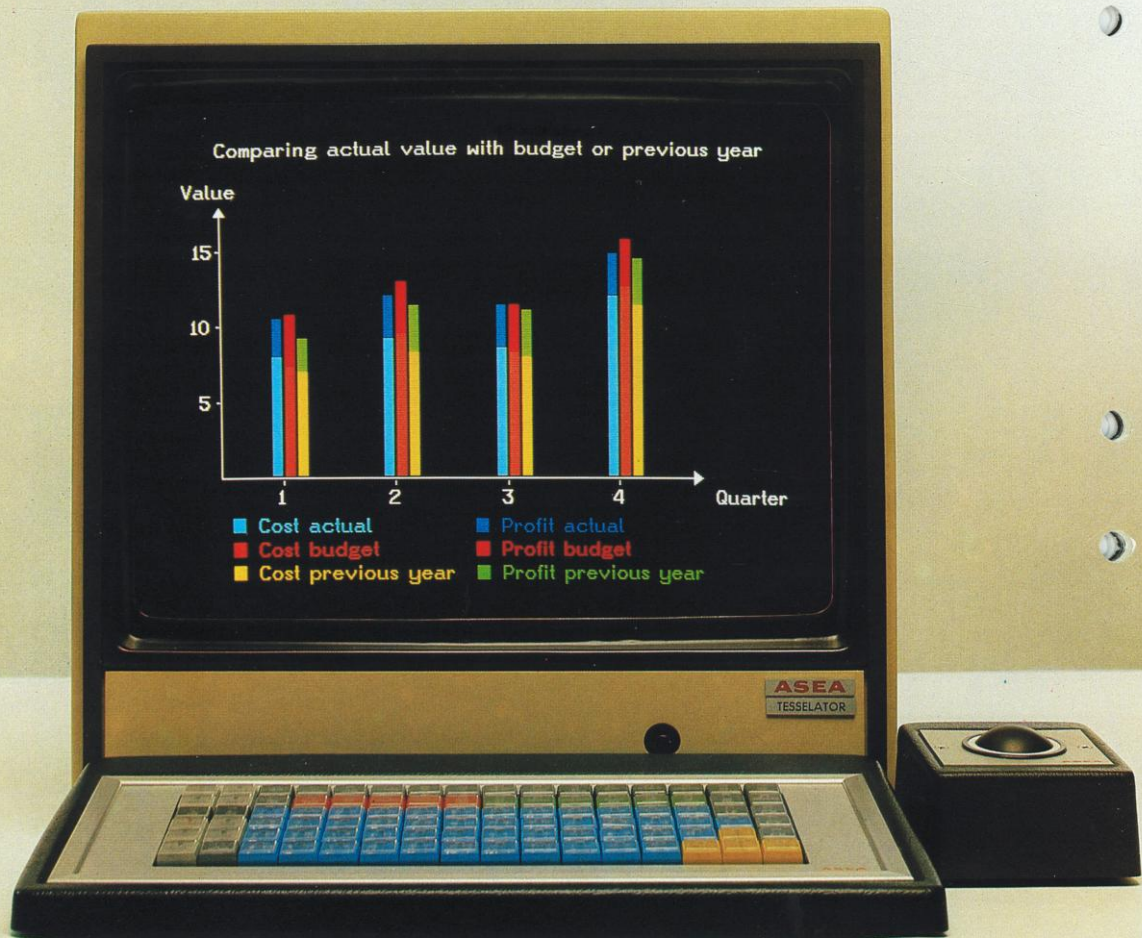


In other industries too, such as mines, computerised control and supervision have become a must. Demands imposed on operators are continuously increasing. They must be capable of making rapid

decisions, during abnormal conditions as well. The TESSELATOR system is invaluable in such circumstances. (801627, 783624)

A distinct difference

The need for computers within industry and administration today is obvious. What is not quite so clear is what kind of link there should be between Man and Computer. We have a better idea now. We should be able to compose displays that utilise Man's unique ability to interpret pictures and patterns. We have to make illustrations that cannot be misinterpreted. We must stress vital information.

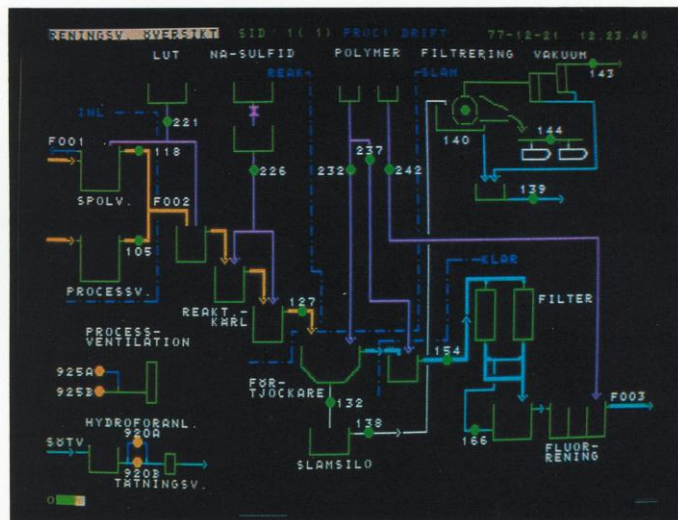


Information of less immediate importance must not be allowed to demand concentration and cause fatigue.

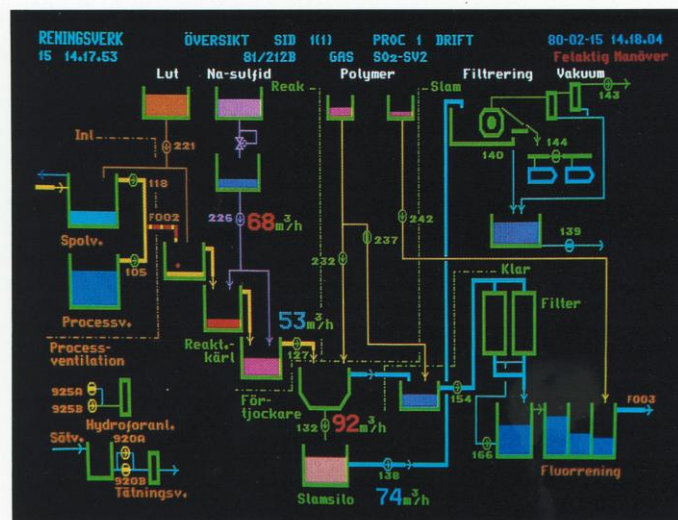
So pitch your requirements high when selecting your display system. Display appearance and resolution may be fine, but check for information content and legibility. And last but not least make sure a fast and uncomplicated man/machine interface capability allows you to adjust your process without delay or risk of error.

The distinctive TESSELATOR system provides you with all the opportunities. All you need do is seize them.

There are a multitude of features that we can't do justice to on paper — ask to see for yourselves!



Conventional system



TESSELATOR

Data

- Graphic colour-display unit
- Four orthogonal writing directions
- Different symbol sizes can be used together in the same diagram to increase legibility
- 896 characters/symbols stored in RWM/PROM
- 64 colours available, for both foreground and background
- General background colour or black background
- Two blink frequencies enable a large number of combinations of rapid, slow and intermittent blinks in both the foreground and background
- Connection via high-speed serial communication link
- Two or four computer interfaces
- Interfaces for up to four keyboards and other interactive devices.
- Highly efficient editing functions including tabulating and window functions
- 56 or 68 rows and 120 characters/row when using the smallest size of characters
- Draughting of both thin and thick lines
- Presentation of trend curves with up to 16 curves and a resolution better than 0.5 %
- Proportional spacing
- Three mutually independent display channels can be obtained with one and the same control unit. The control unit can also be made to act as a buffer to other connected units, e.g. typewriters.
- Flicker-free, dynamic updating of individual positions.
- Zoom function enables quadrupled enlargement of any part of the display.
- Grey-scale output (for hard copy units or black/white monitors)
- ASEA's ergonomically-designed interactive units with low-profile keyboards and track-ball can be connected directly.
- Function codes for sending orders to the computer can be issued via the control unit without affecting the presentation on the display unit.
- Several versions of the monitor with different numbers of lines
- Modular electronics. The individual boards are designed and documented to make replacement simple. LED indicators facilitate servicing. Diagnostic functions are incorporated to allow trouble shooting at three levels; supervising, control and individual fault location.

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