



Working together to improve standards.

ALL CREDITS SATRA

FIVE POINT LEATHER GRADING

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A key factor in the efficient cutting of leather is to ensure it is up to the agreed specification. Tanners and shoemakers are increasingly working together to achieve this as they perceive it to be in their mutual interest. Taiwanese-owned tannery Teh Chang and footwear manufacturer Genfort are a good example and use the SATRA five-point leather grading system to ensure consistent quality.

This has helped them to resolve quality issues and ensure that input into the leather usage calculation programme is realistic and based on the quality of leather actually used. It was made available to members as a separate module outside the SATRASumm software package in 2001 and has proved highly successful.

A GOOD RELATIONSHIP

Teh Chang has supplied leather to Genfort for over 25 years. Both introduced five-point leather grading about six years ago and each is accredited every year in its use. Its adoption has led to a number of changes including a marked improvement in the quality of leather that Teh Chang has delivered. There have also been fewer quality claims by Genfort and the leather now being bought and sold has been agreed by both parties to be 85% usable based on the quality standards required for Genfort's production.

Teh Chang has supplied bovine leathers to the Asian markets since 1982, with 75% going to China and the rest

divided mainly between Vietnam and the Dominican Republic, with some of the world's biggest brands on its customer list. Managing Director Richard Pai readily acknowledges that the benefits have been significant and says that quality issues have been reduced by 30% and quality complaints from 5% to between 2% and 3% due to the fact that both tannery and shoe factory follow the same standards, with graders, inspectors and staff from the business department all agreeing on the grading.

Genfort has been producing shoes in China for 15 years, employs 15,000 people and supplies over 40 brands. It has 26 production lines with a total capacity of one million pairs a month and is convinced of the value of the SATRA five-point system. Company President Robert Tsai says that the key benefit is having a fair and well accepted basis on which to inspect and calculate the area of leather that can be used. Speaking the same language as Teh Chang avoids the disputes that used to arise and the general quality level has improved significantly.

HOW IT WORKS

SATRA is working to improve quality in the supply production chain by the training of quality control personnel from sourcing companies and brands stationed in the actual factories. They benefit from training in using the same methods as the tannery and shoe manufacturer to recognise leather defects and know what is acceptable to use in each product and so prevent quality issues arising. A

FIG. 1 – SATRA FIVE-POINT GRADING SYSTEM

LEATHER GRADE	FIVE-POINT SPREAD (%)	MID POINT (%)
A	100-96	97
B	95-91	93
C	90-86	88
D	85-81	83
E	80-76	78
F	75-71	73

leather appreciation course is provided which includes the following topics:

- Understanding the tanning process
- Different types and finishes of leathers
- Five-point leather grading
- Quality standards and utilisation of leather in the cutting room

The prime objective of leather assessment (in the context of this article) is to measure leather in such a way that a percentage useable figure is obtained. The system is based on six grades, each with a 5% variation of exploitable area. (Figure 1).

To obtain an accurate figure, the leather is first examined by a SATRA-trained person who knows the quality requirements for the styles to be cut. After the leather has been inspected and any sub-standard area defined, the percentage usable figure is decided. This value is then used to calculate how much total leather (that which can be used plus waste) is needed, which helps to establish costs more accurately.

It can also be used to 'correct' the price actually paid for 'useable' material so that the 'true' cost of the leather can be compared with that of alternatives. For example, a leather with a coefficient of 97% will be much better value (lower cost per year) than a similarly priced leather with a coefficient of only 73%. The coefficient becomes a standard figure that the manufacturer can use to define usability in terms of a number; the higher it is, the better the value.

OTHER OBJECTIVES

The supplier's quoted area measurements can be accurately checked on a measuring machine and an area discrepancy coefficient arrived at. This is subtracted from the supplier's quoted area to show the discrepancy coefficient as a percentage figure.

The average skin size can also be determined. If large and/or complicated components have to be cut from a small skin, this may increase the area of leather needed as there will be more unavoidable waste than would be the case on a larger one. This has implications on costing and the quantity of skins the cutter will need.

Leather assessment can also be used to define the best method of cutting; selective when there is little or no visible difference between leathers in the same delivery making it

easier to cut in production and match marked when there are significant differences in colour or grain patterns on skins within a batch. In the latter case, the cutter will need more time to cut and match components. Good examples are nubuck, suede and aniline leathers.

QUALITY STANDARD

To avoid confusion and make assessment easier, a standard UK size 8 inside quarter pattern is used to determine waste regardless of the actual style to be cut. Once the quality requirements of the components to be cut from that particular leather are understood, the grader then uses the quarter template simply to identify demarcation lines of good and bad material. The grader ignores the shape of the pattern and only needs to be knowledgeable in regard to leather. The faults looked for are:

- Loose or fibrous material
- Brand marks, operation scars and open flaws
- Closed flaws, wire marks and scratches
- Growth marks
- Veins
- Flay cuts
- Discoloured areas
- Boardy areas
- Insect or parasitic damage
- Any other defect that may render an area of leather unusable.



Determining the waste area of a skin.

The customer is responsible for providing a clear and unambiguous definition of the quality standard. This can be a physical example such as a specimen skin of leather marked to show which surface defects, characteristics and areas of looseness are unacceptable.

An alternative to an actual skin is a 'defect catalogue', which must contain examples of each type of leather, showing the unacceptable defects and flaws. This should be supplemented by written descriptions or diagrams. The system does not set quality standards; these are by mutual agreement between tanner and shoe factory.

SATRA consultants train the inspection personnel at both companies, ensuring they are competent in using the five-point system such that they can recognise the grade into which each skin should be placed. Each grade represents a spread of five percentage points of exploitable leather when compared to a 100% quality standard and defines the level of usability that can be expected if this standard style was to be cut from it.

Because both sets of quality inspection personnel from the tannery and the shoe factory use the same assessment technique and agree on the same standard, there should be little variation in their assessments. This in turn means fewer disputes and arguments.

After this training, another consultant will return to the factory or tannery for the accreditation procedure where each grader is checked for the correct level of competence and to ensure the correct methods are still being used. If the audit is successful, the company and each grader is awarded a certificate. This accreditation is renewed annually to ensure the level of competence is maintained, that any changes to the standard are reflected in the modified grades applied and to include additional customers' standards if necessary. 🍎



Using the standard quarter template