

# NLGA Flitch – Lesson 6

## I. NLGA Flitch Grade Table

- a) The purpose intended for grading Flitches is for their cutting qualities.
- b) Flitches are graded on the premise that the entire piece will be ripped up into one-inch-thick strips.

### HLSA Fitness for Requirements


**Requirements and Compliance for C-130**  
 1. Weight and Balance  
 2. Fuel Capacity  
 3. Performance  
 4. Airframe

**Weight and Balance**  
 1. Weight  
 2. Balance  
 3. CG  
 4. Moment

**Fuel Capacity**  
 1. Fuel Capacity  
 2. Fuel Consumption  
 3. Fuel System

**Performance**  
 1. Performance  
 2. Altitude  
 3. Speed  
 4. Range

**Airframe**  
 1. Airframe  
 2. Landing Gear  
 3. Engines  
 4. Propellers



Performance Analysis

Airframe Analysis

**Weight and Balance**

1. Weight: 10,000 lbs

2. Balance: 10,000 lbs

3. CG: 10,000 lbs

4. Moment: 10,000 lbs

**Fuel Capacity**

1. Fuel Capacity: 10,000 lbs

2. Fuel Consumption: 10,000 lbs

3. Fuel System: 10,000 lbs

**Performance**

1. Performance: 10,000 lbs

2. Altitude: 10,000 lbs

3. Speed: 10,000 lbs

4. Range: 10,000 lbs

**Airframe**

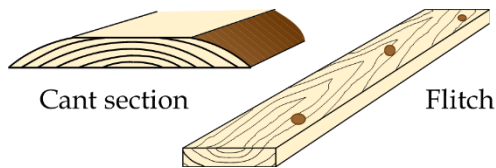
1. Airframe: 10,000 lbs

2. Landing Gear: 10,000 lbs

3. Engines: 10,000 lbs

4. Propellers: 10,000 lbs

## II. Production of Flitches



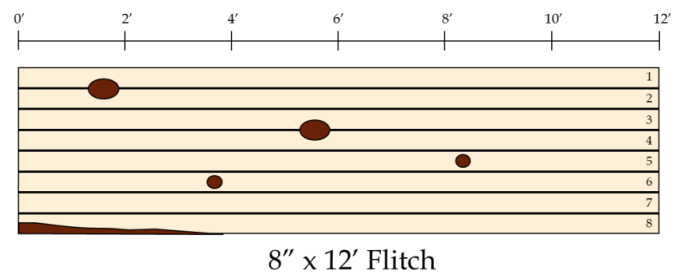
- a) Knots appearing on a vertical grain piece, and which are not showing on either wide face must be considered as passing completely through the piece.

### III. Quality and Size of Cuttings

- Individual cuttings must be flawlessly clear and each cutting must have a minimum rate of growth of six-rings-per-inch and a minimum slope of grain of one-in-eight.
- The minimum cutting length in Flitches is 24-inches-long-or-longer in increments of whole inches.
- For Flitches twelve-feet-and-longer to make the grade of Factory Flitch, 50% of the 80% of the required cuttings (or 40% of the piece), must consist of seven-foot or longer cuttings.
- The grade of Shop Flitch has no requirement for seven-foot long cuttings. Remember, cuttings may be taken up to the edge of knots (to the nearest whole inch), but damaging grain distortion should not be accepted in the cuttings.

#### IV. Flitch Sample:

- Size: 8 inches wide, 12 feet long.
- Graded as one-inch strips.
- Total yield: 96 lineal feet (8 strips  $\times$  12 feet).

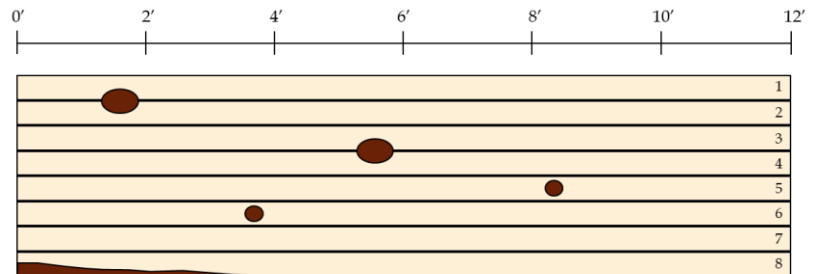


## V. Factory Fitch Waste Allowance:

- a) Maximum 20% waste.
- b) Allowed waste: 19 feet 2 inches.

## VI. Waste Calculation:

- a) **Strip 1:** 2 feet.
- b) **Strip 2:** 2 feet.
- c) **Strips 3 and 4:** 12 inches combined.
- d) **Strip 5:** 3 inches.
- e) **Strip 6:** 3 inches.
- f) **Strip 7:** 0 feet (100% usable).
- g) **Strip 8:** 4 feet.
- h) **Total Waste:** 9½ feet (under 19 feet 2 inches).



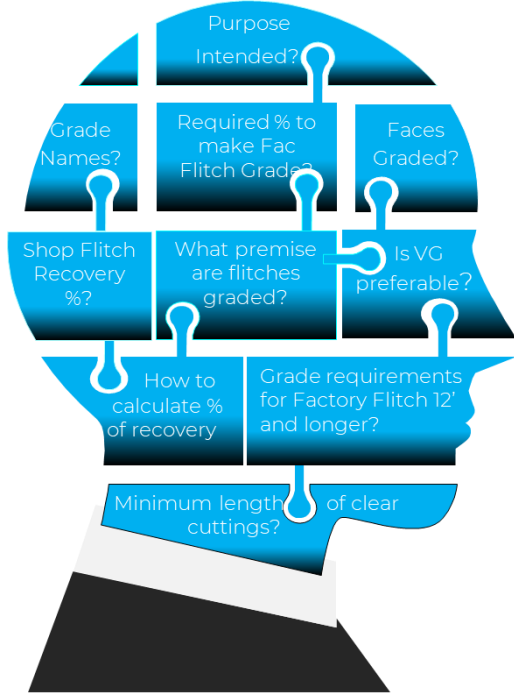
8" x 12' Fitch

## VII. Additional Criterion:

- a) 50% of available cutting recovery (40% of piece) as seven-foot and longer.
- b) Required: 38 feet 4 inches.

## VIII. Seven-Foot and Longer Cuttings:

- a) **Strip 1:** 10 feet.
- b) **Strip 2:** 10 feet.
- c) **Strips 3 and 4:** 0 feet.
- d) **Strips 5 and 6:** 8 feet each.
- e) **Strip 7:** 12 feet.
- f) **Strip 8:** 8 feet.
- g) **Total:** 56 feet (over 38 feet 4 inches).



## NLGA Flitch Review

### Some Thought-Provoking Concepts

- 1 Factory Flitch % Recovery?  
80%
- 2 Grade Names?  
Factory Flitch and Shop Flitch
- 3 Faces Graded?  
Poorest face
- 4 What is the minimum recovery required to make Shop Flitch?  
60%
- 5 Purpose Intended?  
Cutting Qualities
- 6 On what premise are flitches graded?  
That they will be ripped to 1" stock
- 7 Flitches are preferably sawn VG, True or False?  
False
- 8 What is the minimum length of cuttings?  
24" and longer
- 9 What are the grade requirements of Fac. Flitch 12' and longer?  
Piece must yield 80% or more recovery, plus, 40% of the piece must yield 7' and longer cuttings.
- 10 A flitch that is 4x8 – 10' has the following: 45' of cuttings and 35' of waste?  
Reject: recovery is 56.25%, waste is more than 40% (43.75%)