SawSel

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A Program to Improve the
Operation and Design
of
Guided Circular Saws

TKT Engineering Inc.
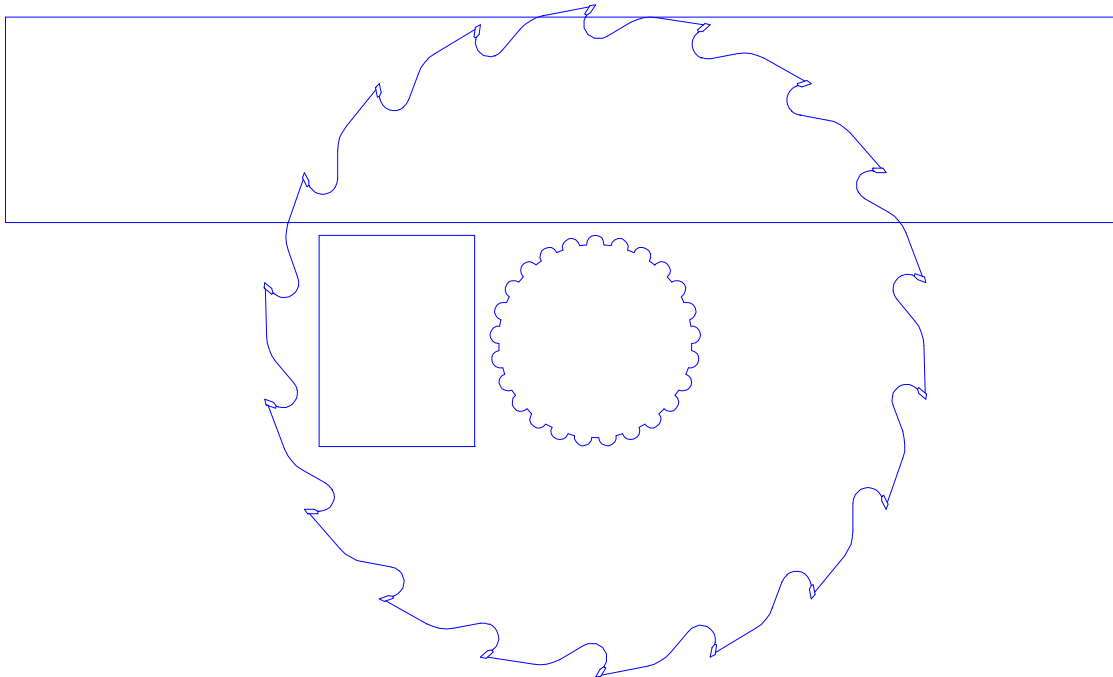
SawSel is......

a tool for sawfilers, maintenance managers, quality control personnel and production supervisors for making decisions about saw design and operations. *SawSel* includes the tried-and-true rules of circular saw design and incorporates the latest developments in sawing technology. *SawSel* is unique. It uses a computer model of the blade to estimate blade stiffness, which is the most important factor affecting cutting accuracy.

Uses for *SawSel*
? Assess how a change in operation affects sawing performance
? Investigate trade-offs between production and recovery
? Give warning when operations are outside accepted conditions
? Trouble shoot sawing problems
? Select saw design and feed speeds for new installations or for rebuilds
? Calculate feeds and speeds
? Teaching aid about saw operation and design
? Print out reports

Calculations

? Required gullet area
? Bite per tooth
? Recommended arbor speed
? Recommended number of teeth
? Power requirement

Uses results from sawing research to calculate:

? *Load Index (L.I.)* - A measure of sawing accuracy that considers blade stiffness and cutting forces
? *Critical Speed -* The maximum speed to run the saw before vibration instability occurs.

User's Manual

SawSel comes with a manual that includes a tutorial on how to use the program. The information to be typed in for each screen and the calculated values are explained in detail. Each screen also has explanations and instructions for the user.

FINAL DESIGN SPECIFICATIONS		Alt.Calc.#1	Alt.Calc.#2
Spline diameter	6.000	6.000	6.000
Outside saw diameter	22.000	22.000	22.000
Plate thickness	0.095	0.090	0.090
Operating rpm	2150	2150	2150
Maximum depth of cut	6.000	6.000	6.000
Minimum depth of cut	2.000	2.000	2.000
Kerf width	0.135	0.130	0.130
Feed speed	150.000	150.000	140.000
Specific Cutting Energy	35.000	35.000	35.000
Number of teeth	26	26	26
Side Clearances	0.020	0.020	0.020
Tooth spacing	2.658	2.658	2.658
Bite/tooth	0.032	0.032	0.030
Gullet area below tooth	0.206	0.209	0.195
Cutting horsepower	29.531	28.437	26.541

What if...?
Change the...

— Plate thickness
— R.P.M.

— Feed speed

— Number of teeth

See effect on...
Bite per tooth
Load Index

Features of *SawSel*

What if ?

Change one or more sawing parameters and *SawSel* will instantly show how sawing performance is affected. This *"What If"* capability helps the user to quickly investigate the trade-offs between production and recovery.

Report Printing
A summary page, listing all the input and calculated values can be printed for permanent reference.

The background of *SawSel*

SawSel incorporates research on circular sawing that includes work carried out by David Roper, who is President of Thin Kerf Technologies Inc. Mr. Roper previously designed edgers and other sawing centers for Letson & Burpee, Kockums, CanCar and Cetec.

SawSel is unique. It includes a new factor for evaluating circular saw performance. The Load Index provides an accurate measure of blade stiffness that can be used to estimate sawing accuracy.

SawSel is menu driven and organized to be easy to use. It provides the information needed to optimize the sawing process to maximize performance and profit.

Computer Requirements

? 286 Computer or higher

Thin Kerf also produces a companion software program - *BandSel* - designed as a user friendly program for bandsaws.

To order or for more information please contact:

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