METRICS DICTIONARY - Generate Schedule

CIP Summary

Metric on Screen	Definition	Formula	Remarks
AVERAGE CIP UTILIZATION (KPI)	Total Average CIP utilization %	Sum of Individual MC utilization in hours / Sum of Total Available hours	Total Available hours = Maximum End time of cleaning in schedule - Minimum Start time of the schedule with respect to first cleaning or first resource utilization
# RE-CLEANINGS & PRE-CLEANINGS (KPI)	Total number of RE-cleanings and PRE-cleanings with respect to MC	Sum of Individual MC utilization in hours / Sum of Total Available hours	PRE-cleanings - Cleanings taking place due CHT violation from last cleaning of previous schedule RE-cleanings - Cleanings taking place due to CHT violation due to high unutilized time of a resource in a schedule
# DHT VIOLATIONS (KPI)	Total number of DHT violations with respect to Resources	Sum of DHT Violations per Resource	DHT violation - Occurenence of a violation due to cleaning of the resource not taking place in the maximum Dirt Hold Time of the Resource
# CHT VIOLATIONS (KPI)	Total number of CHT violations with respect to Resources	Sum of CHT Violations per Resource	CHT violation - Occurenence of a violation due to utilization of a Resource not taking place in the maximum Clean Hold Time of the Resource
DISTRIBUTION OF CLEANING CYCLES	Percentage of type of cleaning performed	Sum of Post utilization cleanings / Sum of All types of cleanings	Post utilization cleaning - Cleaning taking place after resource usage Pre-cleaning - In this case, pre-cleaning means sum of PRE-cleanings and RE-cleanings
# CLEANINGS DUE TO PREVIOUS SCHEDULE (PRE-CLEANINGS)	Cleanings performed due to first utilization of the schedule with respect to MC	Sum of PRE-cleanings per MC	PRE-cleanings - Cleanings taking place due CHT violation from last cleaning of previous schedule
# RE-CLEANINGS DUE TO CHT VIOLATIONS	Cleanings performed due to CHT violation occurred due to usage after a long time with respect to MC	Sum of RE-cleanings per MC	RE-cleanings - Cleanings taking place due to CHT violation due to high unutilized time in between two utilizations of a Resource
AVERAGE CIP UTILIZATION %	Average CIP utilization %	Sum of Usage of MC / Total Available Hours *100	Usage of MC is the time a MC is utilized to clean a Resource
AVERAGE GROUP CONSTRAINT UTILIZATION %	Average Constraint (pipe) Utilization %	Sum of Usage of Constraint / Total Available Hours *100	Constraints are the pipes connecting MC to Resources according to a specifc mapping provided

RESOURCE Summary

Metric	Definition	Formula	Remarks
CIP UTILIZATION % (KPI)	Total Average CIP utilization %	Sum of Individual MC utilization in hours / Sum of Total Available hours	Total Available hours = Maximum End time of cleaning in schedule - Minimum Start time of the schedule with respect to first cleaning or first resource utilization
# RE-CLEANINGS & PRE-CLEANINGS (KPI)	Total number of RE-cleanings and PRE-cleanings with respect to MC	Sum of (Individual MC utilization in hours) / Sum of (Total Available hours)	PRE-cleanings - Cleanings taking place due CHT violation from last cleaning of previous schedule RE-cleanings - Cleanings taking place due to CHT violation due to high unutilized time of a resource in a schedule
# DHT VIOLATIONS (KPI)	Total number of DHT violations with respect to Resources	Sum of DHT Violations per Resource	DHT violation - Occurenence of a violation due to cleaning of the resource not taking place in the maximum Dirt Hold Time of the
# CHT VIOLATIONS (KPI)	Total number of CHT violations with respect to Resources	Sum of CHT Violations per Resource	CHT violation - Occurenence of a violation due to utilization of a Resource not taking place in the maximum Clean Hold Time of the
# CLEANINGS DUE TO PREVIOUS SCHEDULE (PRE-CLEANINGS)	Cleanings performed due to first utilization of the schedule with respect to Resources	Sum of PRE-cleanings per Resource	PRE-cleanings - Cleanings taking place due CHT violation from last cleaning of previous schedule
# RE-CLEANINGS DUE TO CHT VIOLATIONS	Cleanings performed due to CHT violation occurred due to usage after a long time with respect to Resources	Sum of RE-cleanings per Resource	RE-cleanings - Cleanings taking place due to CHT violation due to high unutilized time of a resource in a schedule
FREQUENCY OF UTILIZATION	Number of utilziations for the given schedule	Sum of Number of Utilization per Resource	Amount of times resource has been used
AVERAGE RESOURCE USAGE	Usage percentage of the resource for the given schedule	Sum of Usage time per Resource / Total Available Hours *100	Usage time of Resource is the utilization duration

METRICS DICTIONARY - Business Metrics

CIP Summary

Metric on Screen	Definition	Formula	Remarks
Average CIP UTILIZATION (KPI)	Total Average CIP utilization %	Sum of Individual MC utilization in hours *100 / Sum of Total Available hours	Total Available hours = Maximum End time of cleaning in schedule - Minimum Start time of the schedule with respect to first cleaning or first resource utilization
TOTAL CIP UTILIZATION (KPI)	Total number of hours CIP has been utilized for cleaning	Sum of Cleaning duration from cleanings performed	Cleaning duration is the time taken by a MC to perform a particular cleaning of a Resource
TOTAL CLEANING CYCLES (KPI)	Total number of cleanings performed	Sum of number of completed cleanings	Number of cleanings conducted by MC on Resources
ADDITIONAL CLEANINGS POSSIBLE (KPI)	Total number of additional that could have been performed	Sum of number of cleanings possible	Number of total possible cleanings that can added
CIP USAGE DURATION	Total CIP usage duration per CIP	Sum of Usage Duration per CIP	Usage duration of CIP refers to the time taken for the CIP
CIP USAGE DISTRIBUTION	Distribution of % of usage of each CIP	Sum of Cleaning duraition of cleanings performed by specific CIP / Sum of Cleaning duraition of cleanings performed	To check if all MC's are optimally used and the cleaning load is equally distributed
CIP UTILISATION WEEKLY/MONTHLY TREND	CIP usage % monthly/weekly per CIP	Sum of Usage duration of MC for cleaning / Total Available Hours	Usage duration of MC for cleaning is the time taken by MC to complete a particular cleaning on a Resource
CIP UTILISATION WEEKLY/MONTHLY TREND	CIP usage Duration monthly/weekly per CIP	Sum of Usage duration of MC for cleaning	Usage duration of MC for cleaning is the time taken by MC to complete a particular cleaning on a Resource
AVG TIME GAP BETWEEN CONSECUTIVE CLEANINGS	Average elapsed time between two consecutive usages of the same CIP	Mean of Idle time between two consecutive CIP utilizations	Idle time = Duration where MC is unutilized

RESOURCE Summary

Metric	Definition	Formula	Remarks
# RE-CLEANINGS & PRE-CLEANINGS (KPI)	Total number of re-cleanings and pre-cleanings with respect to MC	Sum of Individual MC utilization in hours / Sum of Total Available hours	PRE-cleanings - Cleanings taking place due CHT violation from last cleaning of previous schedule RE-cleanings - Cleanings taking place due to CHT violation due to high unutilized time of a resource in a schedule
# DHT VIOLATIONS (KPI)	Total number of DHT violations with respect to Resources	Sum of DHT Violations per Resource	DHT violation - Occurenence of a violation due to cleaning of the resource not taking place in the maximum Dirt Hold Time of the Resource
# CHT VIOLATIONS (KPI)	Total number of CHT violations with respect to Resources	Sum of CHT Violations per Resource	CHT violation - Occurenence of a violation due to utilization of a Resource not taking place in the maximum Clean Hold Time of the Resource
AVERAGE USAGE % (KPI)	Usage percentage of a Resource	Sum of total utilization time of a Resource *100 / Total Available Hours	Usage of Resource is the time taken for a particular Resource utilization
Top 10 Resource Recleanings	Total number of PRE-cleanings and RE-cleanings with respect to Resources	Sum of PRE-cleanings and Sum of RE-cleanings	PRE-cleanings - Cleanings taking place due CHT violation from last cleaning of previous schedule RE-cleanings - Cleanings taking place due to CHT violation due to high unutilized time of a resource in a schedule
DHT VIOLATION TREND	Total number of DHT violations with respect to Resources	Sum of DHT Violations per Resource	DHT violation - Occurenence of a violation due to cleaning of the resource not taking place in the maximum Dirt Hold Time of the Resource
CHT VIOLATIONS TREND	Total number of CHT violations with respect to Resources	Sum of CHT Violations per Resource	CHT violation - Occurenence of a violation due to utilization of a Resource not taking place in the maximum Clean Hold Time of the Resource