Package ‘rgsp’

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Type Package

Title Repetitive Group Sampling Plan Based on Cpk

Version 0.2.0

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Description Functions to calculate Sample Number and Average Sample Number for Repetitive Group Sampling Plan Based on Cpk as given in Aslam et al. (2013) (<DOI:10.1080/00949655.2012.663374>).

Depends R (>= 3.1)

Imports dplyr, magrittr, tibble

License GPL-2

URL https://github.com/myaseen208/rgsp,
https://myaseen208.github.io/rgsp/

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RoxygenNote 6.1.0

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Suggests testthat

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Description

The rgsp package provides functionalities to calculate Sample Number and Average Sample Number for a Repetitive Group Sampling Plan based on Cpk as given in Aslam et al. (2013).

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References


rgsp_asym1 ......................................... Repetitive Group Sampling Plan Based on Cpk under asymmetric Case 1

Description

Calculates Sample Number and Average Sample Number for Repetitive Group Sampling Plan based on Cpk under asymmetric case 1 as given in Aslam et al. (2013)

Usage

## Default S3 method:
rgsp_asym1(.p1, .p2, .alpha, .beta, .nums, .rep)
Arguments

- `.p1` Acceptable Quality Level (AQL) Probability
- `.p2` Limiting Quality Level (LQL) Probability
- `.alpha` Producer’s alpha-risk
- `.beta` Consumer’s beta-risk
- `.nums` Number of samples with replacement at each iteration
- `.rep` Number of iterations

Value

Sample Number and Average Sample Number

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References


Examples

```r
grsp_asym1(
  .p1 = 0.001,
  .p2 = 0.005,
  .alpha = 0.050,
  .beta = 0.100,
  .nums = 10000,
  .rep = 10 # 1000
)
```
rgsp_asym2

Repetitive Group Sampling Plan Based on Cpk under asymmetric Case 2

Description

Calculates Sample Number and Average Sample Number for Repetitive Group Sampling Plan based on Cpk under asymmetric case 2 as given in Aslam et al. (2013)

Usage

```r
## default S3 method:
rgsp_asym2(.p1, .p2, .alpha, .beta, .nums, .rep)
```

Arguments

- `.p1`  Acceptable Quality Level (AQL) Probability
- `.p2`  Limiting Quality Level (LQL) Probability
- `.alpha`  Producer's alpha-risk
- `.beta`  Consumer's beta-risk
- `.nums`  Number of samples with replacement at each iteration
- `.rep`  Number of iterations

Value

Sample Number and Average Sample Number

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References

Examples

```r
gsp_sym2(
  .p1 = 0.001,
  .p2 = 0.003,
  .alpha = 0.050,
  .beta = 0.100,
  .nums = 10000,
  .rep = 10 # 1000
)
```

**Description**

Calculates Sample Number and Average Sample Number for Repetitive Group Sampling Plan based on Cpk under symmetric case as given in Aslam et al. (2013)

**Usage**

```r
## Default S3 method:
gsp_sym(.p1, .p2, .alpha, .beta, .nums, .rep)
```

**Arguments**

- `.p1` Acceptable Quality Level (AQL) Probability
- `.p2` Limiting Quality Level (LQL) Probability
- `.alpha` Producer's alpha-risk
- `.beta` Consumer's beta-risk
- `.nums` Number of samples with replacement at each iteration
- `.rep` Number of iterations

**Value**

Sample Number and Average Sample Number

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References


Examples

```r
code
rgsp_sym(
  .p1 = 0.0010
  , .p2 = 0.0020
  , .alpha = 0.0500
  , .beta = 0.1000
  , .nums = 10000
  , .rep = 10 # 1000
)
```
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