# CONTINUOUS SAMPLING PLANS

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## 1. Introduction

The purpose of the present paper is to review the subject of continuous sampling plans. These plans are used where production is continuous and the formation of inspection lots for lot-by-lot acceptance may be impractical or artificial, often the case for conveyor line production. The inspection is carried out by alternate sequences of consecutive item inspection (often called the 100% inspection) and sequences of production which are not inspected or from which sample items are inspected. In the plans discussed in this paper, each item inspected is classified as defective or nondefective. The theory has not yet been extended to permit continuous sampling for items that are measured on a continuous scale.

## 2. The Dodge plan

Perhaps the simplest continuous sampling plan is the one proposed by Dodge [1] in his pioneer paper in 1943. This procedure (called CSP-1) follows. At the outset of inspection, inspect 100% of the units consecutively as produced and continue such inspec-

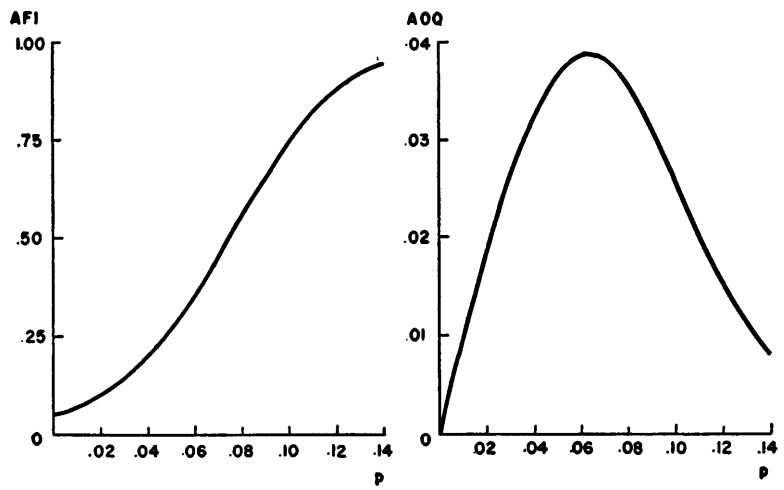


FIGURE 1
Properties of CSP-1 plan; $f = .05$, $i = 38$

tion until $i$ units in succession are found clear of defects. When this happens discontinue 100% inspection and inspect only a fraction $f$ of the units, selecting one unit at random from each segment of $1/f$ items. If a single defective is found, revert immediately to 100% inspection of succeeding units and continue until again $i$ units in succession are found clear of defects. In other plans the rules for partial and 100% inspection are more complicated but the basic notion of continuous inspection may be illustrated with this