

CONTENTS

§1.	Kummer coverings	1
1.1.	Some remarks on diagonalizable groups	1
1.2.	Kummer coverings	4
1.3.	Generalized Kummer coverings	8
1.4.	Inertia groups and connected components of generalized Kummer coverings	17
1.5.	Extension of the group of operators	19
1.6.	Generalized Kummer coverings over strict local rings	23
1.7.	Special properties	25
1.8.	Divisors with normal crossings	26
§2.	Tamely ramified coverings of schemes	30
2.1.	Tamely ramified fields	30
2.2.	Tame ramification of normal schemes	32
2.3.	Tame ramification and Abhyankar's theorem	38
2.4.	The category $\text{Rev}^D(S)$	40
§3.	Extension of some notions from the theory of schemes to the theory of formal schemes.	44
3.1.	General remarks	44
3.2.	Étale coverings of formal schemes	49
§4.	Tamely ramified coverings of formal schemes	52
4.1.	Definition and elementary properties	52
4.2.	The category $\text{Rev}^D(\mathcal{J})$	55
4.3.	Relation between the tamely ramified coverings of a formal scheme and those of a subscheme defined by an Ideal of definition	58

4.4. Transitivity properties	62
§5. The tame fundamental group of a formal neighbourhood of an irreducible divisor.	69
5.1. Preliminary investigation of the relation between the tame fundamental group of an irreducible divisor and the tame fundamental group of its formal neighbourhood	69
5.2. Preliminary investigation of the extension	76
§6. Comparison of two 2-cohomology classes	82
6.0. Introduction	82
6.1. Étale morphisms of formal schemes	82
6.2. Coverings of Kummer type	86
6.3. Comparison of two 2-cohomology classes	91
§7. The tame fundamental group of a formal neighbourhood of an irreducible divisor (continued)	97
7.1. Determination of the extension	97
7.2. Determination of the kernel	100
7.3. Final results and examples.	107
§8. Descent of tamely ramified coverings	110
8.1. Descent of Modules and Algebras on formal schemes	110
8.2. Descent of tamely ramified coverings	114
8.3. Reformulation of the previous results in terms of the fundamental groups	119
§9. An application: The fundamental group of the spectrum of a complete local ring, of dimension two, minus a closed set	122
Index terminology	129
References	132